# UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF PENNSYLVANIA

LILLEBABY, LLC

Plaintiff

**CIVIL ACTION NO.:** 

v.

ARTSANA-USA INC. f/b/a CHICCO USA INC.

**DEMAND FOR JURY TRIAL** 

Defendant

# <u>COMPLAINT FOR PATENT INFRINGEMENT</u>

Plaintiff LILLEbaby, LLC, for its Complaint against Artsana USA, Inc. f/k/a Chicco USA Inc. ("Defendant" or "Chicco"), alleges on its own knowledge and on information and belief as follows:

# **NATURE OF THE CASE**

1. This Action seeks damages and injunctive relief for patent infringement.

# **PARTIES**

- 2. Plaintiff LILLEbaby, LLC ("LILLEbaby") is a limited liability company duly organized and existing under the laws of the State of Delaware with its principal place of business at 700 12th Street, Golden, Colorado 80401.
- 3. On information and belief, Defendant Artsana USA Inc. f/k/a Chicco USA Inc. is a Delaware Corporation, having a principal place of business and/or headquarters at 1826 William Penn Way, Lancaster, Pennsylvania, 17601-6711.

## **JURISDICTION AND VENUE**

4. This is an Action for patent infringement arising under the patent laws of the United States, including 35 U.S.C. § 271 et seq.

- 5. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).
- 6. This Court has personal jurisdiction over Defendant due to Defendant's continuous, systematic and substantial contacts within the Commonwealth of Pennsylvania including: (i) maintaining its principal place of business and/or headquarters in Pennsylvania; (ii) committing at least a portion of the infringements alleged herein in Pennsylvania; (iii) marketing, distributing, and selling its products in Pennsylvania throughout the relevant time period; and (iv) regularly doing or soliciting business in Pennsylvania, engaging in other persistent courses of conduct in Pennsylvania, and/or deriving substantial revenue from goods and services provided to individuals in Pennsylvania.
- 7. By way of example, Defendant Chicco sells its products in Pennsylvania through, *inter alia*, its own online store <a href="https://www.chiccousa.com">https://www.chiccousa.com</a> and through online retailers including Amazon.com. Defendant Chicco's sale of products through its website "are shipped only on business days from our *warehouse in Lancaster, Pennsylvania.*" See <a href="https://www.chiccousa.com/ordering-faqs/ordering-faqs.html">https://www.chiccousa.com/ordering-faqs/ordering-faqs.html</a> (emphasis added).
- 8. Moreover, Chicco has previously availed itself of personal jurisdiction in Pennsylvania and this District as plaintiff in civil actions. *See, e.g.*, 5:10-cv-00740 (LS) (E.D. Pa.).
- 9. Venue is appropriate in this District pursuant to 28 U.S.C. §§ 1391(b), (c) and/or 28 U.S.C. § 1400(b). Upon information and belief, Defendant has transacted business in this District and has committed acts of patent infringement in this District. Moreover, Defendant has a regular and established place of business in Pennsylvania and within this District.

# **FACTUAL BACKGROUND**

- 10. Lisbeth Lehan, as a new mother, searched for a suitable child carrier after her first child was born. Unfortunately, she found available carriers wanting. Then-existing child carriers offered limited carrying positions and were quickly outgrown. In addition, they poorly distributed weight and were uncomfortable for both the child and transporting individual. Ms. Lehan purchased a carrier and tried it with her child. Unfortunately, her use of the carrier with her child caused her great discomfort.
- 11. Ms. Lehan's less than satisfactory experience with available child carriers led her to create innovative carriers that are sold by her company, LILLEbaby. The LILLEbaby carriers are adaptable both to the child's development stage and size, and a child may be carried in various positions, such as facing inward or outward, and on the transporting individual's front, hip or back, which improves weight distribution. An illustration of the various carrying positions is reproduced below.



- 12. From its humble beginnings, LILLEbaby has grown to become one of the leading child carrier producers on the market. Since then, LILLEbaby has marketed, promoted, advertised, and sold its child carriers and related products through multiple channels, including on its well-known website located at <a href="https://www.lillebaby.com">www.lillebaby.com</a>.
- 13. The industry recognized the value of Ms. Lehan's innovation. Indeed, the LILLEbaby carrier has received numerous accolades and unsolicited media attention. For

example, Baby Gizmo wrote "I feel like I had to buy 3 different carriers to get all the features LILLEbaby put into one." Baby Bottom Line said "The carrier is. . . the Mother of all carriers . . . . it's NUTS! This . . . by far . . . is the most functional carrier I have used!" The LILLEbaby carrier has also received numerous awards, including the "Mom's Choice Awards," the Babylist "Best Pick" award, the Tillywig "Parents' Favorite Products" award, the "Cribsie" award and is a Mom Trends "Must-haves" winner.

- 14. LILLEbaby has invested significant resources to protect its innovations, including pursuing patent protection as discussed *infra*.
- 15. LILLEbaby's patents have been infringed by parties including Defendant in this action.

# THE PATENTS-IN-SUIT

- 16. LILLEbaby is the owner of all rights, title and interest to U.S. Patent No. 8,172,116 ("the '116 Patent") entitled "Child Carrier Having Adaptive Leg Supports" issued on May 8, 2012. A copy of the '116 Patent is attached hereto as **Exhibit 1**.
- 17. LILLEbaby has the sole and exclusive right to prosecute this Action, enforce the '116 Patent against infringers including Defendant, and to collect damages on the '116 Patent for all relevant times.
- 18. LILLEbaby has complied with any applicable marking requirements under 35 U.S.C. § 287 for the '116 Patent.
- 19. LILLEbaby is the owner of all rights, title and interest to U.S. Patent No. 8,424,732 ("the '732 Patent") entitled "Child Carrier Having Adaptive Leg Supports" issued on April 23, 2013. A copy of the '732 Patent is attached hereto as **Exhibit 2**.

- 20. LILLEbaby has the sole and exclusive right to prosecute this Action, enforce the '732 Patent against infringers including Defendant, and to collect damages on the '732 Patent for all relevant times.
- 21. LILLEbaby has complied with any applicable marking requirements under 35 U.S.C. § 287 for the '732 Patent.
- 22. The '116 and '732 Patents are collectively referred to herein as the "Asserted Patents."

# **DEFENDANT'S INFRINGING CONDUCT**

- 23. On information and belief, Defendant imports into the United States, sells for importation and/or sells after importation infringing child carriers in the United States.
- 24. Specifically, Defendant uses, offers to sell, and sells within the United States, and imports into the United States certain infringing child carriers including Chicco's 3-Way Close to You products (hereinafter "the Accused Products").
- 25. By way of example, Chicco sells the Accused Products in the United States through, *inter alia*, online retailers including Amazon.com.
- 26. Chicco further directs consumers to certain brick and mortar retail stores within the United States that warehouse and sell the Accused Products—and where in turn—consumers can make in-store purchases of the Accused Products. *See*<a href="https://www.chiccousa.com/stores">https://www.chiccousa.com/stores</a>.
- 27. Chicco advertises the Accused Products carriers under its own Chicco brand name.
- 28. The Accused Products are currently the subject of a Complaint filed by LILLEbaby seeking to commence an Investigation commenced by the U.S. International Trade

Commission ("ITC") into violations of Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 ("ITC Investigation"), for infringement of the Asserted Patents.

# **COUNT I – INFRINGEMENT OF THE '116 PATENT**

- 29. LILLEbaby restates and incorporates by reference the paragraphs above as if stated fully herein.
- 30. On information and belief, in violation of 35 U.S.C. § 271(a), Defendant has, literally and under the doctrine of equivalents, directly infringed at least claim 1 of the '116 Patent by, among other things, making, using, offering for sale, and/or selling within the United States, and importing into the United States, the Accused Products as described *supra*, and will continue to do so unless such infringing activities are enjoined by this Court.
- 31. Specific claim charts demonstrating Defendants' infringement of the '116 Patent for each of the Accused Products are attached hereto as **Exhibit 3**.<sup>1</sup>
- 32. LILLEbaby has suffered, and continues to suffer, damages and irreparable harm as a result of Defendant's past and ongoing infringement.
- 33. Unless Defendant's infringement is enjoined, LILLEbaby will continue to be damaged and irreparably harmed.
- 34. Defendant has had knowledge of the '116 Patent since at least the date of the filing of this Action.
- 35. Defendant's ongoing infringement of the '116 Patent has been willful and deliberate, making this an exceptional case and entitling LILLEbaby to recover enhanced trebled damages and attorneys' fees pursuant to 35 U.S.C. §§ 284, 285.

6

<sup>&</sup>lt;sup>1</sup> All claim charts attached hereto are for pleading purposes only—and shall not preclude nor be deemed replacements of LILLEbaby's infringement contentions to be served at a later date set by the Court in its Scheduling Order.

# **COUNT II – INFRINGEMENT OF THE '732 PATENT**

- 36. LILLEbaby restates and incorporates by reference the paragraphs above as if stated fully herein.
- 37. On information and belief, in violation of 35 U.S.C. § 271(a), Defendant has, literally and under the doctrine of equivalents, directly infringed at least claim 10 of the '732 Patent by, among other things, making, using, offering for sale, and/or selling within the United States, and importing into the United States, the Accused Products as described *supra*, and will continue to do so unless such infringing activities are enjoined by this Court.
- 38. Specific claim charts demonstrating Defendants' infringement of the '732 Patent for each of the Accused Products is attached hereto as **Exhibit 4**.
- 39. LILLEbaby has suffered, and continues to suffer, damages and irreparable harm as a result of Defendant's past and ongoing infringement.
- 40. Unless Defendant's infringement is enjoined, LILLEbaby will continue to be damaged and irreparably harmed.
- 41. Defendant has had knowledge of the '732 Patent since at least the date of the filing of this Action.
- 42. Defendant's ongoing infringement of the '732 Patent has been willful and deliberate, making this an exceptional case and entitling LILLEbaby to recover enhanced trebled damages and attorneys' fees pursuant to 35 U.S.C. §§ 284, 285.

# **DEMAND FOR JURY TRIAL**

43. Pursuant to Fed. R. Civ. P. 38, Plaintiff demands a trial by jury of all issues triable of right to a jury and raised by the pleadings in this action.

# PRAYER FOR RELIEF

WHEREFORE, Plaintiff LILLEbaby requests that this court enter the following orders and judgments:

- a. Awarding damages no less than a reasonable royalty together with interests and costs;
- b. Preliminary and permanently enjoining Defendant and its parents, subsidiaries, divisions, officers, directors, agents, dealers, representatives, servants, employees, successors, assigns, and all parties acting in concert or participation with them, from infringing the Asserted Patents;
- c. Finding Defendant's infringement of the Asserted Patents to be willful under 35 U.S.C. § 284 and trebling damages accordingly;
- d. Finding this to be an exceptional case and awarding LILLEbaby attorney fees under 35 U.S.C. § 285; and
- e. Awarding LILLEbaby such other and further relief as the Court deems just and proper.

By:

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Dated: March 6, 2019

# EXHIBIT 1



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TO ALL TO WHOM THESE; PRESENTS SHALL COMES

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

**September 24, 2018** 

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: 8,172,116
ISSUE DATE: May 08, 2012

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By Authority of the

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office

> SYLVIA HOLLEY Certifying Officer



## (12) United States Patent Leban et al.

(10) Patent No.:

US 8,172,116 B1

(45) Date of Patent:

May 8, 2012

# (54) CHILD CARRIER HAVING ADAPTIVE LEG SUPPORTS

- (76) Inventors: Lisbeth Hals Lehan, Niwot, CO (US); Stephen Boyer Lehan, Niwot, CO (US)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 953 days.
- (21) Appl. No.: 12/220,765
- (22) Filed: Jul. 28, 2008
- (51) Int. Cl.

  A61G 1/00 (2006.01)

  A45F 3/14 (2006.01)

  A45F 3/04 (2006.01)

  A45F 3/08 (2006.01)
- (52) U.S. Cl. ...... 224/160; 224/159

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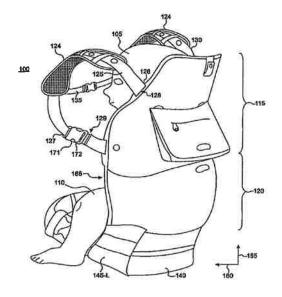
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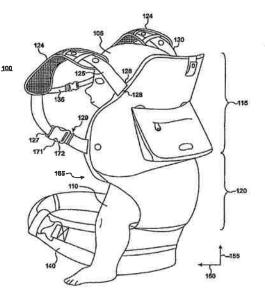
Primary Examiner — Justin Larson
Assistant Examiner — Lester L Vanterpool
(74) Attorney, Agent, or Firm — Tobey & Associates, LLC;
Morley C. Tobey, Jr.

#### (57) ABSTRACT

A carrier for transporting a child by a transporting individual. The carrier includes a torso support part configured for supporting the torso of the child, a seat support part coupled to the torso support part, and at least one strap coupled to the torso support part and/or to the seat support part and with the torso support part and the seat support part configured to encircle at least part of the torso of the transporting individual. The seat support part is configured for supporting the posterior of the child in a sitting position in a first configuration, and the seat support part is configured for supporting the posterior of the child in a hanging position in a second configuration.

#### 26 Claims, 15 Drawing Sheets





U.S. Patent May 8, 2012

Sheet 1 of 15

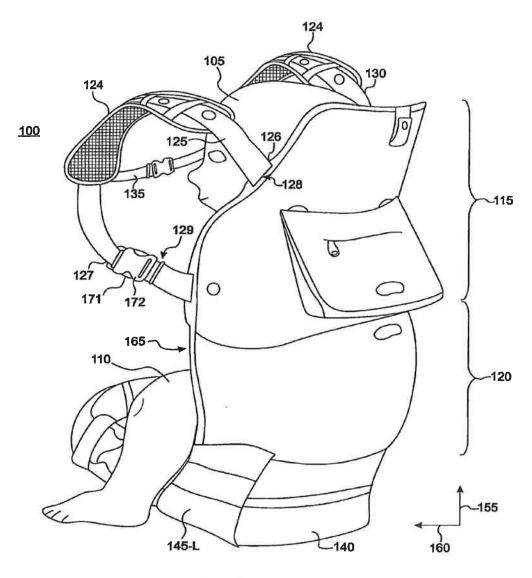


FIG. 1

May 8, 2012

Sheet 2 of 15

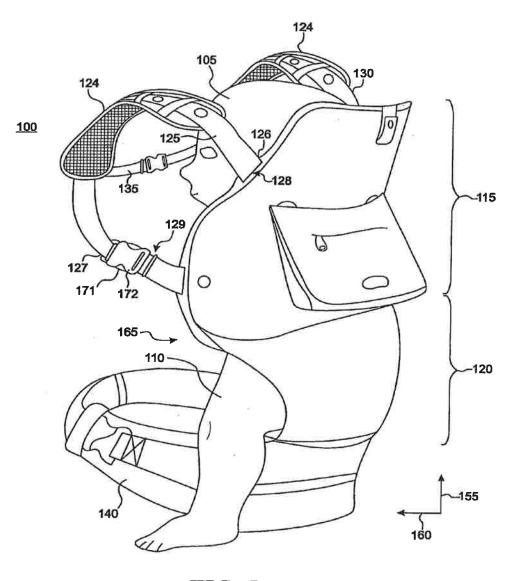
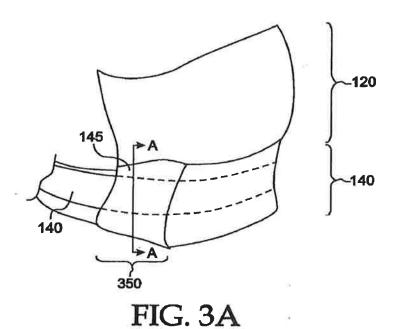


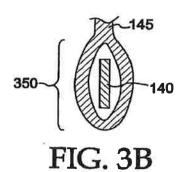
FIG. 2

May 8, 2012

Sheet 3 of 15

US 8,172,116 B1





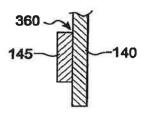


FIG. 3C

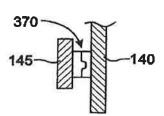


FIG. 3D

May 8, 2012 Sheet 4 of 15

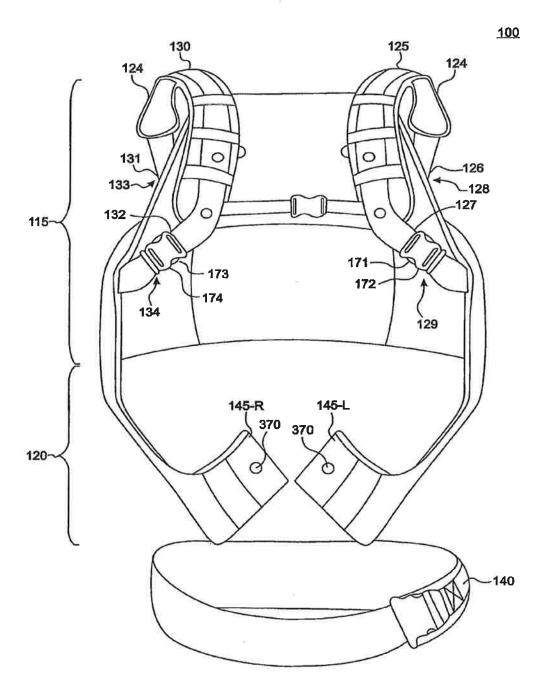


FIG. 3E

U.S. Patent May 8, 2012 Sheet 5 of 15 US 8,172,116 B1

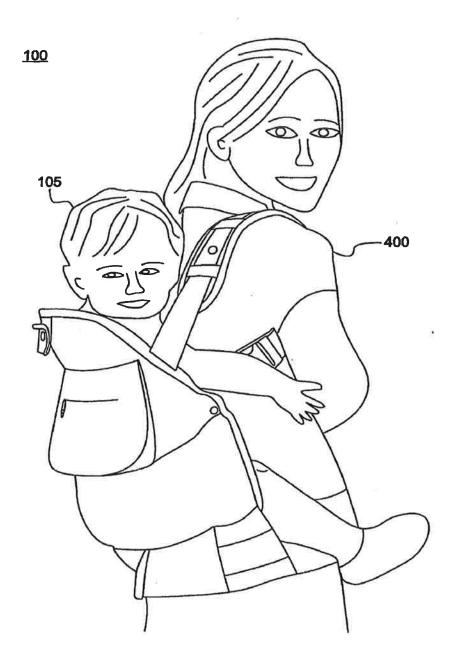


FIG. 4

U.S. Patent May 8, 2012 Sheet 6 of 15 US 8,172,116 B1

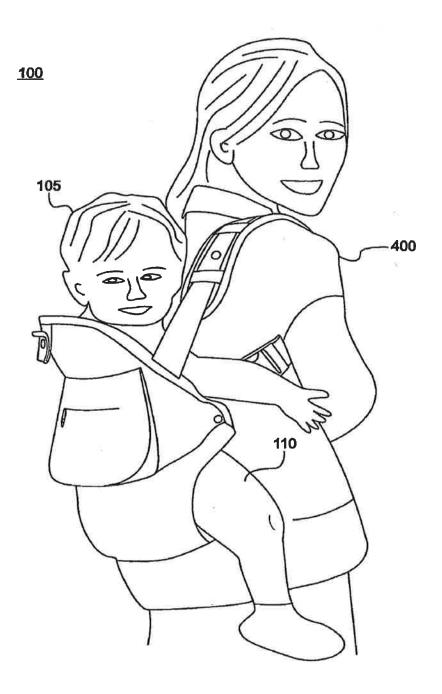


FIG. 5

May 8, 2012

Sheet 7 of 15

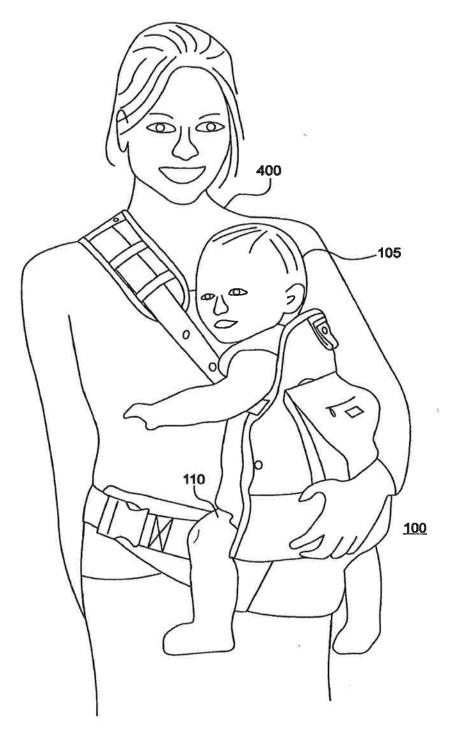


FIG. 6

U.S. Patent May 8, 2012 Sheet 8 of 15 US 8,172,116 B1

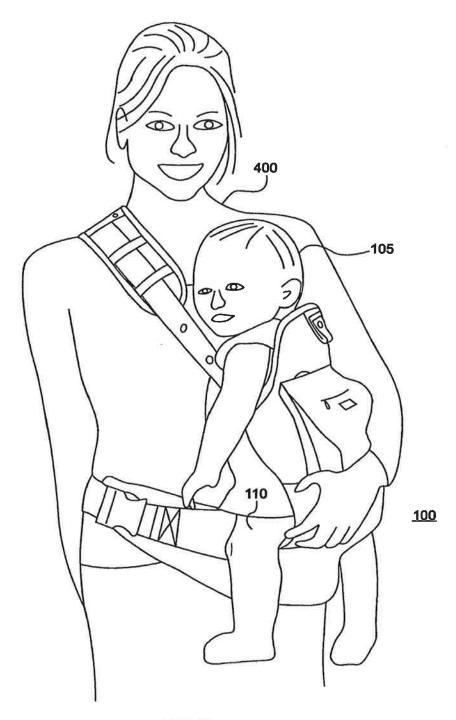


FIG. 7

U.S. Patent May 8, 2012 Sheet 9 of 15 US 8,172,116 B1

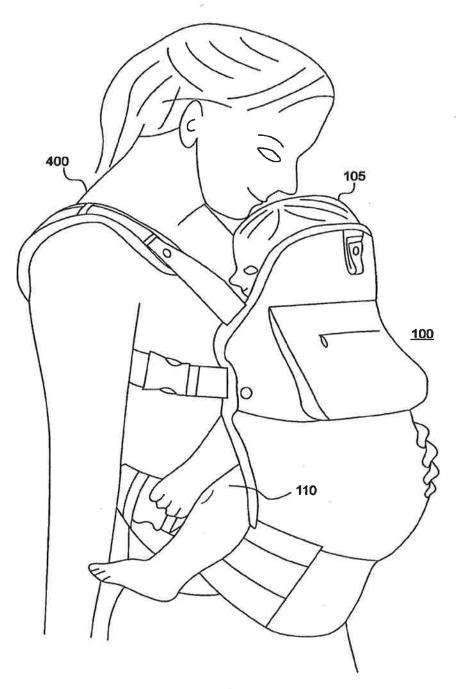


FIG. 8

U.S. Patent May 8, 2012 Sheet 10 of 15

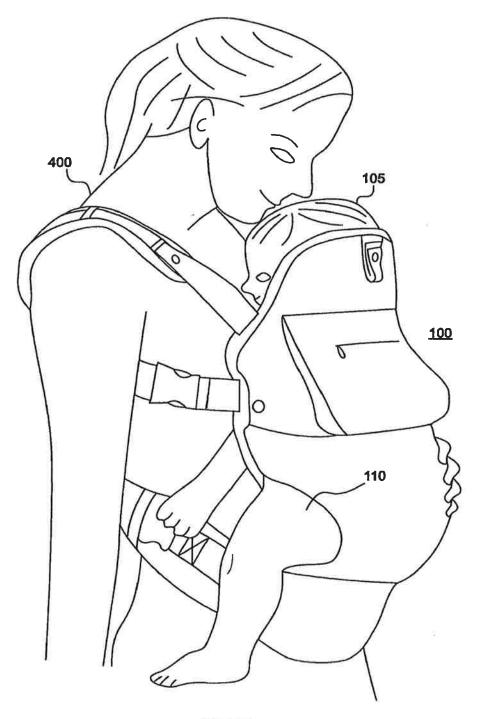


FIG. 9

U.S. Patent May 8, 2012 Sheet 11 of 15

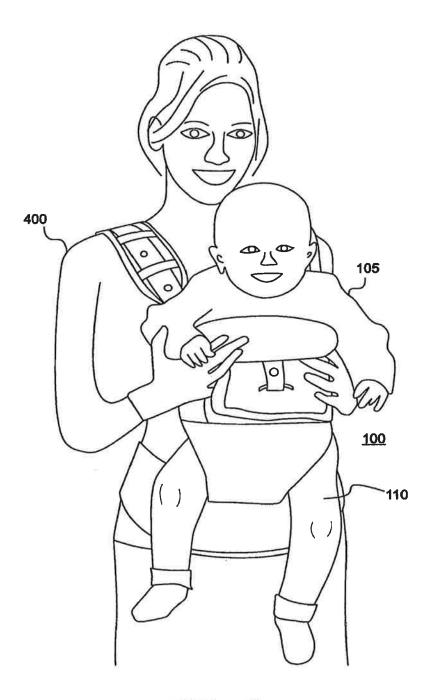


FIG. 10

U.S. Patent May 8, 2012 Sheet 12 of 15 US 8,172,116 B1

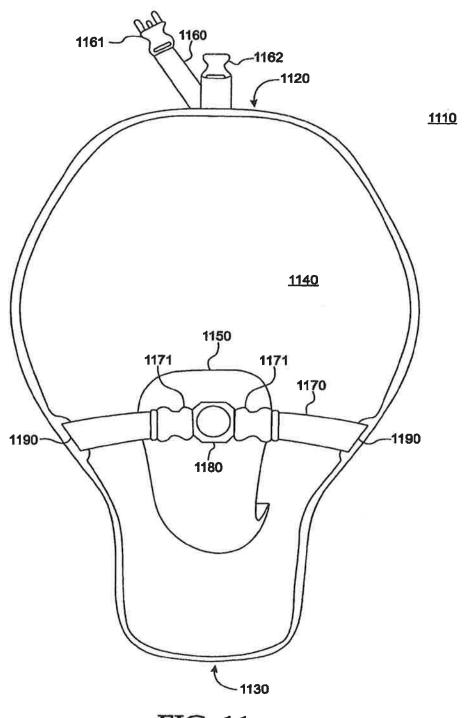
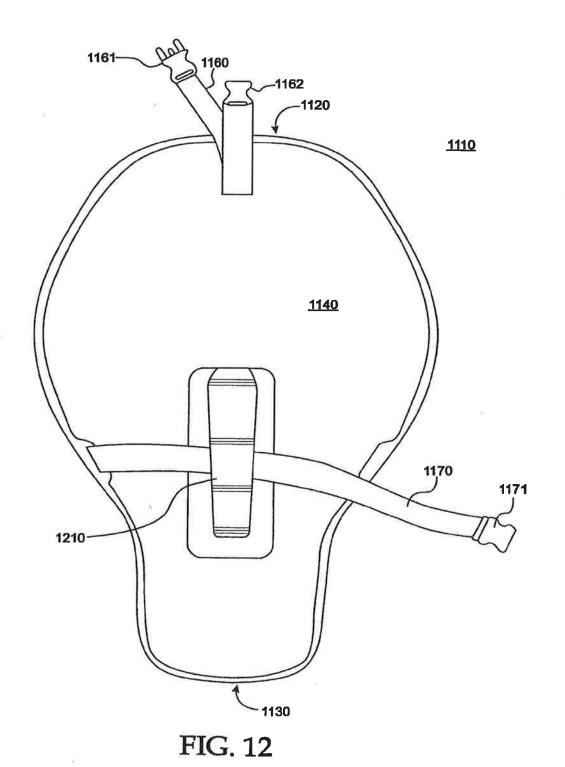


FIG. 11

U.S. Patent May 8, 2012 Sheet 13 of 15 US 8,172,116 B1



May 8, 2012

Sheet 14 of 15

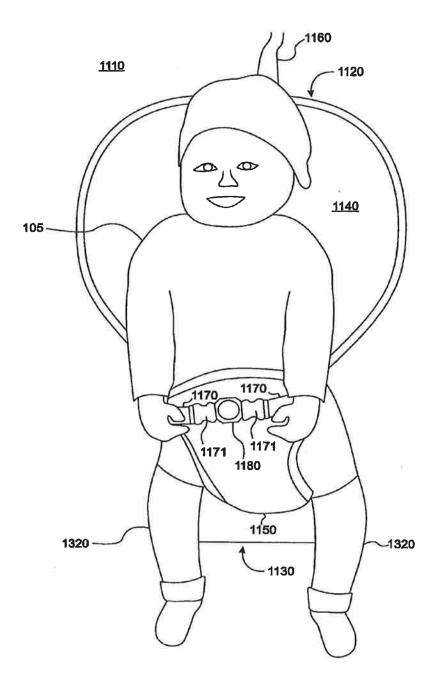


FIG. 13

May 8, 2012 Sheet 15 of 15

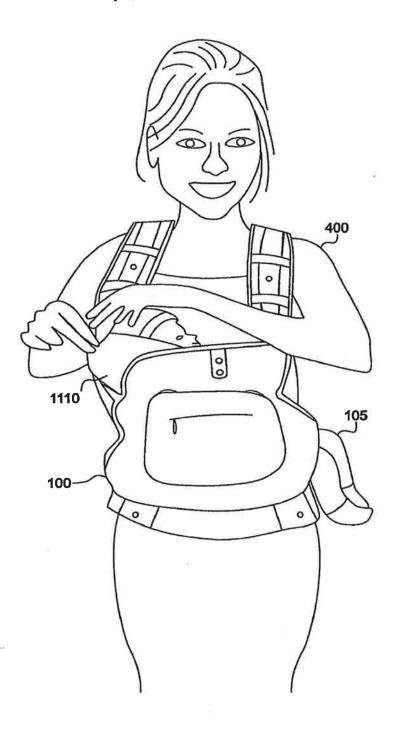


FIG. 14

#### US 8,172,116 B1

#### CHILD CARRIER HAVING ADAPTIVE LEG SUPPORTS

#### BACKGROUND

Various infant carriers have been and are currently available for transporting a child by a parent or other individual. Each of the infant carriers is designed for a limited carrying mode, i.e., on the back, the front, or the hip of the parent. Each is also designed for a limited age, limited weight, and limited size of child to be carried in the carrier. The carriers available range from soft, light-weight carriers that snuggle the child to the front of the parent to larger carriers having metal frames intended for carrying the child on the parent's back.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings provide visual representations which will be used to more fully describe various representative embodiments and can be used by those skilled in 20 the art to better understand the representative embodiments disclosed and their inherent advantages. In these drawings, like reference numerals identify corresponding elements.

FIG. 1 is a drawing of a child carrier with an outline of a child in the child carrier with the upper legs of the child 25 supported as described in various representative embodiments.

FIG. 2 is a drawing of the child carrier with an outline of a child in the child carrier of FIG. 1 with the upper legs of the child unsupported.

FIG. 3A is a drawing of one of the upper-leg-support parts coupled to the hip belt of the child carrier of FIG. 1.

FIG. 3B is a drawing of the upper-leg-support part coupled to the hip belt of the child carrier at cross-section A-A of FIG. 3A.

FIG. 3C is a drawing of an alternative embodiment of the coupling of the upper-leg-support part to the hip belt of the child carrier of FIG. 3A.

FIG. 3D is a drawing of an alternative embodiment of the coupling of the upper-leg-support part to the hip belt of the 40 child carrier of FIG. 3A.

FIG. 3E is a drawing of an inside view of the child carrier of FIG. 1.

FIG. 4 is a drawing of the child carrier of FIG. 1 with the child carried on the back of a transporting individual, with the 45 child facing toward the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 5 is a drawing of the child carrier of FIG. 1 with the child carried on the back of the transporting individual, with the child facing the transporting individual, and with the 50 child's upper legs (thighs) unsupported.

FIG. 6 is a drawing of the child carrier of FIG. 1 with the child carried on the hip of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 7 is a drawing of the child carrier of FIG. 1 with the child carried on the hip of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) unsupported.

FIG. 8 is a drawing of the child carrier of FIG. 1 with the 60 child carried in front of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 9 is a drawing of the child carrier of FIG. 1 with the child carried in front of the transporting individual, with the 65 child facing the transporting individual, and with the child's upper legs (thighs) unsupported.

2

FIG. 10 is a drawing of the child carrier of FIG. 1 with the child carried in front of the transporting individual, with the child facing away from the transporting individual, and with the child's upper legs (thighs) unsupported.

FIG. 11 is a drawing of a front view of a cradle insert as described in various representative embodiments.

FIG. 12 is a drawing of a back view of the cradle insert of FIG. 11.

FIG.  ${f 13}$  is a drawing of a child placed in the cradle insert of 0 FIG.  ${f 11}$ .

FIG. 14 is a drawing of the child carrier of FIG. 1 with the child carried in the cradle insert in a reclining position in front of the transporting individual.

#### DETAILED DESCRIPTION

As shown in the drawings for purposes of illustration, novel child carriers are disclosed herein that enable carrying the child in various positions including on the back, on the hip, and in front of an individual. In various configurations, the upper legs or thighs of the child can be supported proximately perpendicular to the body of the child. And in other configurations, the thighs of the child can bang proximately parallel to the body of the child. Dependent upon the size and weight of the child, the individual may find it more comfortable to carry the child in one of these configurations than in the others and/or the child may be more comfortable in one of these configurations than in the other serviced in the configurations available for carrying the child.

In the following disclosure, when a child is described as being in a child carrier in a sitting position, a proximate sitting position, or an ergonomic sitting position, the thighs of the child are supported proximately perpendicular to the child's body with that part of the child's legs below his/her knees hanging generally downward. As used herein, the upper part of the child's legs means the child's thighs. When the child is described as being in the child carrier in a hanging position, the thighs of the child are for the most part unsupported with both the upper (thighs) and lower parts of the child's legs generally hanging downward. In the following detailed description and in the several figures of the drawings, like elements are identified with like reference numerals.

FIG. 1 is a drawing of a child carrier 100 with an outline of a child 105 in the child carrier 100 with the upper legs 110 of the child 105 supported as described in various representative embodiments. As referred to herein, the upper legs 110 of the child 105 are the child's thighs 110. The child carrier 100 comprises a torso support part 115, a seat support part 120, a left shoulder strap 125, a right shoulder strap 130, a chest strap 135, and a hip belt 140. The seat support part 120 comprises a left upper-leg-support part 145-L and a right upper-leg-support part 145-R. Upper-leg-support part 145 refers to the left upper-leg-support part 145-L, the right upper-leg-support part 145-R, or to both the left and the right upper-leg-support parts 145-L,145-R. The right upper-legsupport part 145-R is hidden from view in FIG. 1 by the seat support part 120 but is shown in FIG. 3E. A shoulder pad 124 is coupled to each shoulder strap 125,130, wherein each shoulder pad 124 is removable from its associated shoulder strap 125,130 and can be replaced or not replaced as desired.

The torso support part 115 is configured for supporting the back of the child 105 while in the carrier 100. The seat support part 120 is configured for supporting the posterior of the child 105 while in the carrier 100 and is coupled to the torso support part 115. The chest strap 135 can be used to secure the left and the right shoulder straps 125,130 together.

#### US 8,172,116 B1

3

The left shoulder strap 125 has an upper left-strap end 126 and a lower left-strap end 127, and the right shoulder strap 130 has an upper right-strap end 131 and a lower right-strap end 132. The upper left-strap end 126 is coupled to the left side of the torso support part 115 at an upper left coupling point 128 on the torso support part 115; the lower left-strap end 127 is coupled to the left side of the torso support part 115 at a lower left coupling point 129 on the torso support part 115; the upper right-strap end 131 is coupled to the right side of the torso support part 115 at an upper right coupling point 10 133 on the torso support part 115; and the lower right-strap end 132 is coupled to the right side of the torso support part 115 at a lower right coupling point 134 on the torso support part 115. Neither the upper right-strap end 131, the lower right-strap end 132, the upper right coupling point 133, nor 15 the lower right coupling point 134 are visible in FIG. 1 due to the presence of the torso support part 115 but are symmetrically located to that of respectively the upper left-strap end 126, the lower left-strap end 127, the upper left coupling point 128, and the lower left coupling point 129 and are shown in 20 FIG. 3E. The upper left coupling point 128 is located further from the seat support part 120 than is the lower left coupling point 129, and the upper right coupling point 133 is located further from the seat support part 120 than is the lower right coupling point 134.

The left shoulder strap 125 comprises a first fastener 171 at the lower left-strap end 127; the right shoulder strap 130 comprises a third fastener 173 at the lower right-strap end 132; the torso support part 115 comprises a second fastener 172 at the lower left coupling point 129; and the torso support 30 part 115 comprises a fourth fastener 174 at the lower right coupling point 134. The third fastener 173 and the fourth fastener 174 are hidden from view in FIG. 1 by the seat support part 120. The first fastener 171 and the second fastener 172 are configured such that they can be coupled 35 together resulting in the coupling of the left shoulder strap 125 to the torso support part 115. The third fastener 173 and the fourth fastener 174 are configured such that they can be coupled together resulting in the coupling of the right shoulder strap 130 to the torso support part 115. The first fastener 40 171 and the third fastener 173 are further configured such that they can be coupled to each other. In a representative embodiment, the first fastener 171 could be a male type fastening device, the second fastener 172 a female type fastening device, the third fastener 173 a female type fastening device, 45 and the fourth fastener 174 a male type fastening device. In another representative embodiment, the first fastener 171 could be a female type fastening device, the second fastener 172 a male type fastening device, the third fastener 173 a male type fastening device, and the fourth fastener 174 a female 50 type fastening device. The left and right shoulder straps 125, 130 are adjustable in length as are other items including, but not necessarily limited to, the chest strap 130 and the hip belt 140.

The left upper-leg-support part 145-L is coupled to the left side of the seat support part 120 and the right upper-leg-support part 145-R is coupled to the right side of the seat support part 120; the seat support part 120 is coupled to the hip belt 140; the left upper-leg-support part 145-L is further configured for detachable coupling to the left side of the hip belt 140, and the right upper-leg-support part 145-R is further configured for detachable coupling to the right side of the hip belt 140. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the left side of the hip belt 140 as 65 shown in FIG. 1, the carrier 100 is configured for supporting the thighs 110 of the child 105 proximately perpendicular to

the body 165 of the child 105. In this configuration, the child 105 is in a proximate sitting position. When the child 105 is in the child carrier 100 in a sitting position, a proximate sitting position, or an ergonomic sitting position, the thighs 110 of the child 105 are supported proximately perpendicular to the child's 105 body 165 with that part of the child's 105 legs below his/her knees hanging downward. The body 165 of the child is hidden from view in FIG. 1 due to the presence of the torso support part 115 and the seat support part 120. As will be indicated in the discussion of FIG. 2, if the left upper-legsupport part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105. In this configuration, the child 105 is in a proximate hanging position. When the child 105 is in the child carrier 100 in a hanging position, both the upper and lower part of the child's 105 legs are generally hanging downward. In FIG. 1, a vertical line 155 is proximately parallel to the body 165 of the child 105 and a horizontal line 160 is proximately perpendicular to the body 165 of the child 105.

FIG. 2 is a drawing of the child carrier 100 with an outline of a child 105 in the child carrier 100 of FIG. 1 with the upper legs 110 of the child 105 unsupported. Again as referred to herein, the upper legs 110 of the child 105 are the child's thighs 110. The child carrier 100 comprises the torso support part 115, the seat support part 120, the left shoulder strap 125, the right shoulder strap 130, the chest strap 135, and the hip belt 140. The seat support part 120 comprises the left upper-leg-support part 145-L, and the right upper-leg-support part 145-R is hidden from view in FIG. 2 by the seat support part 120 but is shown in FIG. 3E. A shoulder pad 124 is coupled to each shoulder strap 125,130, wherein each shoulder pad 124 is removable from its associated shoulder strap 125,130 and can be replaced or not replaced as desired.

The torso support part 115 is configured for supporting the back of the child 105 while in the carrier 100. The seat support part 120 is configured for supporting the posterior of the child 105 while in the carrier 100 and is coupled to the torso support part 115.

The left shoulder strap 125 has an upper left-strap end 126 and a lower left-strap end 127, and the right shoulder strap 130 has an upper right-strap end 131 and a lower right-strap end 132. The upper left-strap end 126 is coupled to the left side of the torso support part 115 at an upper left coupling point 128 on the torso support part 115; the lower left-strap end 127 is coupled to the left side of the torso support part 115 at a lower left coupling point 129 on the torso support part 115; the upper right-strap end 131 is coupled to the right side of the torso support part 115 at an upper right coupling point 133 on the torso support part 115; and the lower right-strap end 132 is coupled to the right side of the torso support part 115 at a lower right coupling point 134 on the torso support part 115. Neither the upper right-strap end 131, the lower right-strap end 132, the upper right coupling point 133, nor the lower right coupling point 134 are visible in FIG. 2 due to the presence of the torso support part 115 but are symmetrically located to that of respectively the upper left-strap end 126, the lower left-strap end 127, the upper left coupling point 128, and the lower left coupling point 129 and are shown in FIG. 3E. The upper left coupling point 128 is located further from the seat support part 120 than is the lower left coupling point 129, and the upper right coupling point 133 is located further from the seat support part 120 than is the lower right coupling point 134.

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#### US 8,172,116 B1

5

The left shoulder strap 125 comprises a first fastener 171 at the lower left-strap end 127; the right shoulder strap 130 comprises a third fastener 173 at the lower right-strap end 132; the torso support part 115 comprises a second fastener 172 at the lower left coupling point 129; and the torso support part 115 comprises a fourth fastener 174 at the lower right coupling point 134. The third fastener 173 and the fourth fastener 174 are hidden from view in FIG. 1 by the seat support part 120. The first fastener 171 and the second fastener 172 are configured such that they can be coupled 10 together resulting in the coupling of the left shoulder strap 125 to the torso support part 115. The third fastener 173 and the fourth fastener 174 are configured such that they can be coupled together resulting in the coupling of the right shoulder strap 130 to the torso support part 115. The first fastener 15 171 and the third fastener 173 are further configured such that they can be coupled to each other. In a representative embodiment, the first fastener 171 could be a male type fastening device, the second fastener 172 a female type fastening device, the third fastener 173 a female type fastening device, 20 and the fourth fastener 174 a male type fastening device. In another representative embodiment, the first fastener 171 could be a female type fastening device, the second fastener 172 a male type fastening device, the third fastener 173 a male type fastening device, and the fourth fastener 174 a female 25 type fastening device. The left and right shoulder straps 125, 130 are adjustable in length as are other items including, but not necessarily limited to, the chest strap 130 and the hip belt

The left upper-leg-support part 145-L is coupled to the left 30 side of the seat support part 120 and the right upper-legsupport part 145-R is coupled to the right side of the seat support part 120; the seat support part 120 is coupled to the hip belt 140; the left upper-leg-support part 145-L is further configured for detachable coupling to the left side of the hip 35 belt 140, and the right upper-leg-support part 145-R is further configured for detachable coupling to the right side of the hip belt 140. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140 as 40 shown in FIG. 1, the carrier 100 is configured for supporting the thighs 110 of the child 105 proximately perpendicular to the body 165 of the child 105. In this configuration, the child 105 is in a proximate sitting position. The body 165 of the child is hidden from view in FIG. 1 due to the presence of the 45 torso support part 115 and the seat support part 120. As shown in FIG. 2, if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-legsupport part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 50 of the child 105 to hang proximately parallel to the body 165 of the child 105. In this configuration, the child 105 is in a proximate hanging position. In FIG. 2, a vertical line 155 is proximately parallel to the body 165 of the child 105 and a horizontal line 160 is proximately perpendicular to the body 55 165 of the child 105

FIG. 3A is a drawing of one of the upper-leg-support parts 145 coupled to the hip belt 140 of the child carrier 100 of FIG. 1. In FIG. 3A, a portion of the hip belt 140 is passed through a sleeve 350 which provides coupling of the upper-leg-support part 145 to the hip belt 140 and thereby support of one of the upper legs (thighs) 110 of the child 105 when the child 105 is placed in the carrier 100. Both the upper-leg-support part 145 and the hip belt 140 are shown coupled to the seat support part 120 of the carrier 100.

FIG. 3B is a drawing of the upper-leg-support part 145 coupled to the hip belt 140 of the child carrier 100 at cross-

section A-A of FIG. 3A. In FIG. 3B, the hip belt 140 is shown inside the sleeve 350 coupled to the upper-leg-support part 145

FIG. 3C is a drawing of an alternative embodiment of the coupling of the upper-leg-support part 145 to the hip belt 140 of the child carrier 100 of FIG. 3A. In FIG. 3C, the upper-leg-support part 145 is coupled to the hip belt 140 via mating areas of a hook and loop type fastener 360 on the upper-leg-support part 145 and the hip belt 140.

FIG. 3D is a drawing of an alternative embodiment of the coupling of the upper-leg-support part 145 to the hip belt 140 of the child carrier 100 FIG. 3A. In FIG. 3D, the upper-leg-support part 145 is coupled to the hip belt 140 via mating snaps 370 on the upper-leg-support part 145 and the hip belt 140.

FIG. 3E is a drawing of an inside view of the child carrier 100 of FIG. 1. In FIG. 3E, left and right upper-leg-support parts 145-L,145-R are shown folded into the inside of the seat support part 120 of the child carrier 100 for storage when not in use in supporting the thighs 110 of the child 105. A pair of mating snaps 370, one on the left upper-leg-support part 145-L and one on the left inside side of the seat support part 120, similar to that shown in FIG. 3D could be used to securely stow the left upper-leg-support part 145-L, and another pair of mating snaps 370, one on the right upper-legsupport part 145-R and one on the right inside side of the seat support part 120 could be used to securely stow the right upper-leg-support part 145-R. Also shown in FIG. 3E are the torso support part 115, the hip belt 140, the left and the right shoulder straps 125,130, the upper and the lower left-strap ends 126,127, the upper and the lower left coupling points 128,129, the upper and the lower right-strap ends 131,132, the upper and the lower right coupling point 133,134, and the first, the second, the third, and the fourth fasteners 171,172, 173,174. As can be seen in FIG. 3E, when the left and right upper-leg-support parts 145-L,145-R are not in use in supporting the thighs 110 of the child 105 a part of the seat support part 120 on both the left and the right sides also may become unavailable for supporting the seat of the child 105.

FIG. 4 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the back of a transporting individual 400, with the child 105 facing toward the transporting individual 400, and with the child's upper legs (thighs) 110 supported. Neither of the child's 105 upper legs 110 are not visible in FIG. 4.

FIG. 5 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the back of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported.

FIG. 6 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the hip of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 supported. In FIG. 6, the first fastener 171 is coupled to the third fastener 173. The first fastener 171 could be a male type fastening device with the third fastener 173 being a female type fastening device, or the first fastener 171 could be a female type fastening device with the third fastener 173 being a male type fastening device. The left and the right shoulder straps 125, 130 can be adjusted in length as appropriate.

FIG. 7 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the hip of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported. As in FIG. 6, the first fastener 171 of FIG. 7 is coupled to the third fastener 173. The first fastener 171 could be a male type

fastening device with the third fastener 173 being a female type fastening device, or the first fastener 171 could be a female type fastening device with the third fastener 173 being a male type fastening device. The left and the right shoulder straps 125,130 can be adjusted in length as appropriate.

FIG. 8 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in front of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 supported.

FIG. 9 is a drawing of the child carrier 100 of FIG. 1 with 10 the child 105 carried in front of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported.

FIG. 10 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in front of the transporting individual 15 400, with the child 105 facing away from the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported

FIG. 11 is a drawing of a front view of a cradle insert 1110 as described in various representative embodiments. The 20 cradle insert 1110 can be used with the child carrier 100 to transport a younger child 105, such as an infant, in a reclining position. The cradle insert 1110 has a head end 1120 and a foot end 1130 and comprises a pad 1140, a crotch support 1150 coupled to the pad 1140, a first attachment strap 1160 25 coupled to the pad 1140, a second attachment strap 1170 coupled to the pad 1140, and a strap receptacle 1180 coupled to the crotch support 1150. Affixed to the ends of the first attachment strap 1160 are a first and a second clasps 1161, 1162 which are attachable to each other. With the crotch 30 support 1150 placed between the child's 105 legs, the cradle insert 1110 can be secured to the child 105 by coupling each of the two second-attachment-strap ends 1171 of the second attachment strap 1170 to the strap receptacle 1180. The second attachment strap 1170 is held in place by passing it 35 around the pad 1140 and through holes 1190.

FIG. 12 is a drawing of a back view of the cradle insert 1110 of FIG. 11. In FIG. 12, the second attachment strap 1170 is shown coupled to an attachment loop 1210 by passing the second attachment strap 1170 through the attachment loop 40 1210. In other representative embodiments, various other devices could be used for securing the child 105 to the pad 1140

FIG. 13 is a drawing of a child 105 placed in the cradle insert 1110 of FIG. 11. FIG. 13 shows the crotch support 1150 45 placed between the child's 105 legs 1320. The cradle insert 1110 is secured to the child 105 by coupling each of the two second-attachment-strap ends 1171 of the second attachment strap 1170 to the strap receptacle 1180 coupled to the crotch support 1150. As stated above, the second attachment strap 50 1170 is held in place by passing it around the pad 1140 and through holes 1190. The cradle insert 1110 can be secured to the child carrier 100 by encircling one of the shoulder straps 125,130 with the first attachment strap 1160 and coupling the first clasp 1161 to the second clasp 1162. An additional 55 attachment device (not shown in the figures) can be disposed on the inside of the child carrier 100 for coupling with the attachment loop 1210 on the cradle insert 1110. This additional attachment device on the child carrier 100 along with the paired attachment loop 1210 on the cradle insert 1110 provide a second coupling mechanism and, thus, enable more secure coupling of the cradle insert 1110 to the child carrier

FIG. 14 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in the cradle insert 1110 in a reclining 65 position in front of the transporting individual 400. In FIG. 14, the transporting individual 400 is shown carrying the child

105 using the cradle insert 1110 in the child carrier 100. The child 105 is in a reclining position within the cradle insert 1110.

The seat support part 120 of the child carrier 100 can be formed having a general cup shape conforming to the general shape of the child's 105 posterior thereby providing more comfortable support. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140, the carrier 100 is configured for supporting the child 105 in an ergonomic sitting position wherein the thighs 110 of the child 105 are supported proximately perpendicular to the child's 105 body 165 with that part of the child's 105 legs below his/her knees hanging downward. Alternately, if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured such that the seat support part 120 converts to a narrower seat area thereby enabling the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105. This configuration can be used for a younger child 105 that is not large enough for his/her legs to wrap around the transporting individual 400 which could be, for example, a parent or other person sufficiently strong to carry the child 105 in the child carrier 100. Depending upon the situation, the various carrying configurations of the child carrier 100 enable the transporting individual 400 to select the most appropriate configuration for carrying the child 105, i.e., with the child 105 carried on the back, the hip, or the front of the transporting individual 400, with the child facing away from or toward the transporting individual 400, and with the child 105 in the sitting or hanging position as appropriate. One or another configuration may suit a particular child 105 and/or transporting individual 400 better than the others. For example, a younger child 105 may find it more comforting to be carried on the front of the transporting individual 400 and be more comfortable with his/her thighs 110 hanging proximately parallel to the child's 105 body 165. For a sleeping infant, carrying the child 105 on the front of the transporting individual 400 in the cradle insert 1110 may be the most comfortable for the child 105. However, for carrying an older and therefore larger child 105, carrying the child 105 on the back or hip of the transporting individual 400 and be more comfortable. To reduce fatigue, the transporting individual 400 may choose to switch between configurations.

Appropriate attachment of the two shoulder straps 125,130 enables transporting the child 105 on the front, on the back, or on the hip of the transporting individual 400. The coupling of the seat support part 120 to the hip belt 140 helps absorb the movement and weight of the child 105, eases the strain on the back of the transporting individual 400, and provides a smoother ride for both the transporting individual 400 and the child 105.

In various representative embodiments, removable shoulder pads and/or interchangeable shoulder pads can be used with the shoulder straps 125,130. Such shoulder pads could be filled with a gel to enhance the comfort of the transporting individual 400. Other elements such as pockets to hide buckles when the carrier 100 is used as a one-carrying-strap hip carrier, expandable pockets, and/or a removable hood for the child 105 could be used to add to the functionality of the carrier 100.

In a representative embodiment, the cradle insert 1110 enables the carrier 100 to be used with infants such as a newborn child 105 since a newborn child should always be carried in a horizontal position to reduce strain on the infant's

The hip belt 140 of the carrier 100 can be padded and can enable carrying the child 105 on the front, the back, or the hip of the transporting individual 400. With the child 105 sitting in the carrier 100 and the left and right upper-leg-support parts 145-L,145-R coupled to the hip belt 140, the upper part of the legs 110 form a proximate 90 degrees angle to the hip of the child 105 and also form a proximate 90 degrees angle 10 to the lower legs of the child 105 at the child's knees. This position is a more natural sitting position for the child 105 than the position in which the child's legs are hanging straighter and down proximate parallel to the vertical. However, the child 105 can also be carried with his/her legs hang- 15 ing straighter and down. In this mode, the left and right upper-leg-support parts 145-L,145-R can be removed, folded inward toward the seat support part 120, or allowed to hang loose.

Pockets can be added to the carrier 100 for storing the 20 second and the fourth fasteners 172,174 when they are not otherwise coupled to other items. Various other pockets can also be added for carrying miscellaneous items, and a removable or permanent hood can be added for protecting the child's head.

In representative embodiments, child carriers 100 are disclosed herein that enable carrying the child 105 in various positions including on the back, on the hip, or in front of an individual 400. In various configurations, the upper legs 110 or thighs 110 of the child 105 can be supported proximately perpendicular to the body 165 of the child 105. And in other configurations, the thighs 110 of the child 105 can hang proximately parallel to the body 165 of the child 105. Dependent upon the size and weight of the child 105, the individual 400 may find it more comfortable to carry the child 105 in one 35 of these configurations than in the others and/or the child 105 may be more comfortable in one of these configurations than in the others.

The multiple options both for the transporting individual 400 and the multiple options for the child's 105 sitting/hanging positions provide for a long useful lifespan of a given implementation of the carrier 100 since the carrying position can be adjusted to the most comfortable and ergonomic carrying position depending upon the child's 105 weight and age. The transporting individual 400 can choose their own 45 preferred configuration for carrying the child 105 and, if desired, alternate or change carrying positions/configurations at any time dependent upon the situation. Children 105, from a newborn child 105 up to a heavy child 105, can be carried by a transporting individual 400 limited only by the strength of 50 the transporting individual 400.

The configuration needs for a carrier 100 can also change depending upon the situation. When hiking or walking the transporting individual 400 may prefer to carry the child 105 on his or her back. But, when in a crowded area such as a store or on a city street, the transporting individual 400 may prefer to carry the child 105 on his/her hip or in front to have more control over the child 's 105 activities. If the child 105 is tired, a position supporting sleeping, such as a horizontal position or facing the transporting individual 400 may be preferred. If 60 the child 105 is alert, facing the child 105 forward away from the transporting individual 400 may be the preferred configuration as this configuration could allow the child 105 to look around without the child 105 twisting his/her neck.

In a representative embodiment, a carrier 100 for transporting a child 105 by a transporting individual 400 is disclosed. The carrier 100 comprises a torso support part 115 configured

for supporting the torso of the child 105, a seat support part 120 coupled to the torso support part 115, and at least one strap 125,130 coupled to the torso support part 115 and/or to the seat support part 120 and with the torso support part 115 and the seat support part 120 configured to encircle at least part of the torso of the transporting individual 400. The seat support part 120 is configured for supporting the posterior of the child 105 in a sitting position in a first configuration, and the seat support part 120 is configured for supporting the posterior of the child 105 in a hanging position in a second configuration.

10

In another representative embodiment, a carrier 100 for transporting a child 105 is disclosed. The carrier 100 comprises a torso support part 115 configured for supporting the torso of the child 105, a left shoulder strap 125 having an upper and a lower left-strap ends 126,127 configured for coupling to the torso support part 115 at respectively an upper left coupling point 128 and a lower left coupling point 129 on the torso support part 115, a right shoulder strap 130 having an upper and a lower right-strap ends 131,132 configured for coupling to the torso support part 115 at respectively an upper right coupling point 133 and a lower right coupling point 134 on the torso support part 115, a seat support part 120 coupled to the torso support part 115 and configured for supporting the 25 posterior of the child 105, and a hip belt 140 coupled to the seat support part 120. The torso support part 115 includes a left upper-leg-support part 145-L disposed on the left side of the seat support part 120 and a right upper-leg-support part 145-R disposed on the right side of the seat support part 120; the left upper-leg-support part 145-L is further configured for coupling to the left side of the hip belt 140; the right upperleg-support part 145-R is further configured for coupling to the right side of the hip belt 140; if the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140, the carrier 100 is configured for supporting the thighs 110 of the child 105 proximately perpendicular to the body 165 of the child 105; and if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105.

The representative embodiments, which have been described in detail herein, have been presented by way of example and not by way of limitation. It will be understood by those skilled in the art that various changes may be made in the form and details of the described embodiments resulting in equivalent embodiments that remain within the scope of the appended claims.

What is claimed is:

- A carrier for transporting a child by a transporting individual, comprising:
  - a torso support part configured to support the torso of the child placed in the carrier;
  - a left shoulder strap having an upper and a lower left-strap ends configured for coupling to the torso support part at respectively an upper left coupling point and a lower left coupling point on the torso support part;
- a right shoulder strap having an upper and a lower rightstrap ends configured for coupling to the torso support part at respectively an upper right coupling point and a lower right coupling point on the torso support part;
- a seat support part coupled to the torso support part and configured to support the posterior of the child, wherein the seat support part comprises a left upper-leg-support part disposed on the left side of the seat support part and

a torso support part configured to support the torso of the child placed in the carrier;

configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child; and

a hip belt coupled to the seat support part and configured for securing about the hips of the transporting individual

- wherein at least one of the upper leg-support parts is coupled to the hip belt by a fastening device selected from the group consisting of mating areas of a hook and loop type fastener on that upper-leg-support part and the hip belt and mating snaps on that upper-leg-support part and the hip belt.
- The carrier as recited in claim 1, further comprising: a first fastener coupled to the left shoulder strap proximate the lower left-strap end:
- a second fastener coupled to the torso support part proximate the lower left coupling point, wherein the first fastener is configured for coupling to the second fastener;
- a third fastener coupled to the right shoulder strap proxi- 25 mate the lower right-strap end; and
- a fourth fastener coupled to the torso support part proximate the lower right coupling point, wherein the third fastener is configured for coupling to the fourth fastener.
- 3. The carrier as recited in claim 2, wherein the first fastener 30 is a male type fastening device, the second fastener is a female type fastening device, the third fastener a female type fastening device, and the fourth fastener is a male type fastening device or wherein the first fastener is a female type fastening device, the second fastener is a male type fastening device, the second fastener is a male type fastening device, and the fourth fastener is a female type fastening device.
- 4. The carrier as recited in claim 2, wherein the first fastener is configured to enable coupling to the third fastener.
- 5. The carrier as recited in claim 1, wherein the carrier is 40 configurable to enable carrying the child in one of at least two of the following positions: on the back, on the hip, or on the front of the transporting individual.
- 6. The carrier as recited in claim 5, wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, and wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual or facing away from the transporting individual.
- 7. The carrier as recited in claim 1, wherein at least one of the upper leg-support parts comprises a sleeve and wherein the at least one of the upper leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the thighs of the child.
  - 8. The carrier as recited in claim 1, further comprising: a cradle insert configured for removably coupling to the carrier and configured for carrying the child in a reclining position when coupled to the carrier.
- 9. A carrier for transporting a child by a transporting individual, comprising:

a left shoulder strap having an upper and a lower left-strap ends configured for coupling to the torso support part at respectively an upper left coupling point and a lower left coupling point on the torso support part;

a right shoulder strap having an upper and a lower rightstrap ends configured for coupling to the torso support part at respectively an upper right coupling point and a lower right coupling point on the torso support part;

- a seat support part coupled to the torso support part and configured to support the posterior of the child, wherein the seat support part comprises a left upper-leg-support part disposed on the left side of the seat support part and configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child; and
- a hip belt coupled to the seat support part and configured for securing about the hips of the transporting individual,
- wherein if one of the upper-leg-support parts is decoupled from the hip belt, that upper-leg-support part is configured such that it is foldable against the seat support part and/or against the torso support part.
- fastener is configured for coupling to the fourth fastener.

  3. The carrier as recited in claim 2, wherein the first fastener a male type fastening device, the second fastener is a female pe fastening device, the third fastener a female type fastener g device, and the fourth fastener is a male type fastening.
  - The carrier as recited in claim 9, further comprising:
     a first fastener coupled to the left shoulder strap proximate the lower left-strap end;
  - a second fastener coupled to the torso support part proximate the lower left coupling point, wherein the first fastener is configured for coupling to the second fastener;
  - a third fastener coupled to the right shoulder strap proximate the lower right-strap end; and
  - a fourth fastener coupled to the torso support part proximate the lower right coupling point, wherein the third fastener is configured for coupling to the fourth fastener.
  - 12. The carrier as recited in claim 11, wherein the first fastener is a male type fastening device, the second fastener is a female type fastening device, the third fastener a female type fastening device, and the fourth fastener is a male type fastening device or wherein the first fastener is a female type fastening device, the second fastener is a male type fastening device, the third fastener a male type fastening device, and the fourth fastener is a female type fastening device.
  - 13. The carrier as recited in claim 11, wherein the first fastener is configured to enable coupling to the third fastener.
    - 14. The carrier as recited in claim 9, wherein the carrier is configurable to enable carrying the child in one of at least two of the following positions: on the back, on the hip, or on the front of the transporting individual.
    - 15. The carrier as recited in claim 14, wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, and wherein if the carrier is configured for

13

carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual or facing away from the transporting individual.

16. The carrier as recited in claim 9, wherein at least one of 5 the upper leg-support parts comprises a sleeve and wherein the at least one of the upper leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the thighs of the child.

17. The carrier as recited in claim 9, further comprising:

a cradle insert configured for removably coupling to the carrier and configured for carrying the child in a reclining position when coupled to the carrier.

18. A carrier for transporting a child by a transporting 15 individual, comprising:

a torso support part configured to support the torso of the child placed in the carrier;

a left shoulder strap having an upper and a lower left-strap ends configured for coupling to the torso support part at respectively an upper left coupling point and a lower left coupling point on the torso support part;

a right shoulder strap having an upper and a lower rightstrap ends configured for coupling to the torso support part at respectively an upper right coupling point and a lower right coupling point on the torso support part;

- a seat support part coupled to the torso support part and configured to support the posterior of the child, wherein the seat support part comprises a left upper-leg-support part disposed on the left side of the seat support part and configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child; and
- a hip belt coupled to the seat support part and configured for securing about the hips of the transporting individual.
  - wherein the left upper-leg-support part is further configured for coupling to the left side of the hip belt, wherein the right upper-leg-support part is further configured for coupling to the right side of the hip helt
- 19. The carrier as recited in claim 18, wherein if the left upper-leg-support part is coupled to the left side of the hip belt and the right upper-leg-support part is coupled to the right side of the hip belt, the left upper-leg-support part and the right upper-leg-support part are configured for supporting the child's thighs proximately perpendicular to the child's body, and wherein if the left upper-leg-support part is decoupled from the left side of the hip belt and the right upper-leg-

support part is decoupled from the right side of the hip belt, the left upper-leg-support part and the right upper-leg-support part are configured to enable the child's thighs to hang proximately parallel to the child's body.

14

20. The carrier as recited in claim 18, further comprising: a first fastener coupled to the left shoulder strap proximate the lower left-strap end;

a second fastener coupled to the torso support part proximate the lower left coupling point, wherein the first fastener is configured for coupling to the second fastener:

a third fastener coupled to the right shoulder strap proximate the lower right-strap end; and

a fourth fastener coupled to the torso support part proximate the lower right coupling point, wherein the third fastener is configured for coupling to the fourth fastener.

21. The carrier as recited in claim 20, wherein the first fastener is a male type fastening device, the second fastener is a female type fastening device, the third fastener a female type fastening device, and the fourth fastener is a male type fastening device or wherein the first fastener is a female type fastening device, the second fastener is a male type fastening device, the third fastener a male type fastening device, and the fourth fastener is a female type fastening device.

22. The carrier as recited in claim 20, wherein the first fastener is configured to enable coupling to the third fastener.

23. The carrier as recited in claim 18, wherein the carrier is configurable to enable carrying the child in one of at least two of the following positions: on the back, on the hip, or on the front of the transporting individual.

24. The carrier as recited in claim 23, wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual, and wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual or facing away from the transporting individual.

25. The carrier as recited in claim 18, wherein at least one of the upper leg-support parts comprises a sleeve and wherein the at least one of the upper leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the thighs of the child.

26. The carrier as recited in claim 18, further comprising: a cradle insert configured for removably coupling to the carrier and configured for carrying the child in a reclining position when coupled to the carrier.

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# EXHIBIT 2



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TO ALL TO WHOM THESE PRESENTS SHAM COMES

# UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office

February 13, 2019

THIS IS TO CERTIFY THAT ANNEXED HERETO IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF:

U.S. PATENT: 8,424,732

U 7710730

ISSUE DATE: April 23, 2013

By Authority of the

Under Secretary of Commerce for Intellectual Property and Director of the United States Patent and Trademark Office



R GLOVER
Certifying Officer



US008424732B1

# (12) United States Patent Lehan et al.

## (10) Patent No.:

US 8,424,732 B1

# (45) Date of Patent:

Date of Patent: \*Apr. 23, 2013

#### (54) CHILD CARRIER HAVING ADAPTIVE LEG SUPPORTS

- (76) Inventors: Lisbeth Hals Lehan, Niwot, CO (US); Stephen Boyer Lehan, Niwot, CO (US)
- (\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 94 days.

This patent is subject to a terminal disclaimer.

- (21) Appl. No.: 13/429,327
- (22) Filed: Mar. 24, 2012

### Related U.S. Application Data

(63) Continuation of application No. 12/220,765, filed on Jul. 28, 2008, now Pat. No. 8,172,116.

(51)	Int. Cl.	
	A61G 1/00	(2006.01)
	A45F 3/14	(2006.01)
	A45F 3/04	(2006.01)
	A45F 3/08	(2006.01)

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<sup>\*</sup> cited by examiner

Primary Examiner — Nathan J Newhouse

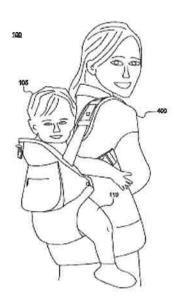
Assistant Examiner — Lester L Vanterpool
(74) Attorney, Agent, or Firm — Tobey & Associates, LLC;
Morley C. Tobey, Jr.

#### (57) ABSTRACT

A carrier for transporting a child by a transporting individual The carrier includes a torso support part configured for supporting at least part of the torso of the child if the child is seated in the carrier, a seat support part coupled to the torso support part and configured for supporting the posterior of the child, and a hip belt coupled to the seat support part and configured for securing about the hips of the transporting individual. The seat support part is configured for enabling one or both upper legs of the child to hang substantially unsupported and in at least one alternative configuration at least one upper-leg-support part is coupled to the seat support part and to the hip belt and is configured for supporting at least part of one or both upper legs of the child.

#### 14 Claims, 15 Drawing Sheets





Apr. 23, 2013 Sheet 1 of 15

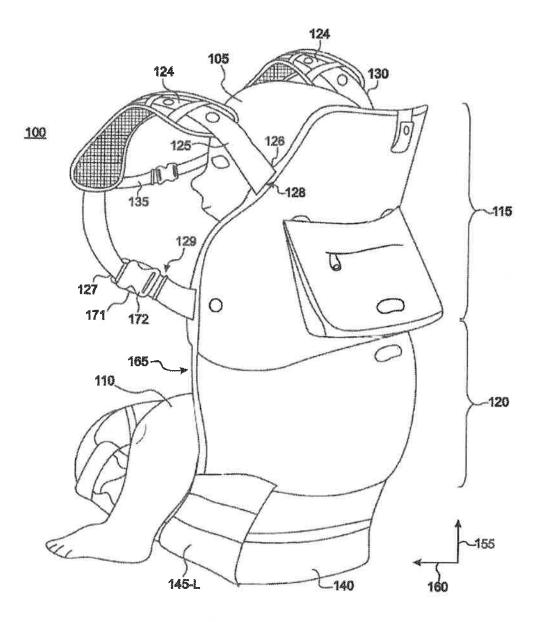


FIG. 1

Apr. 23, 2013 Sheet 2 of 15

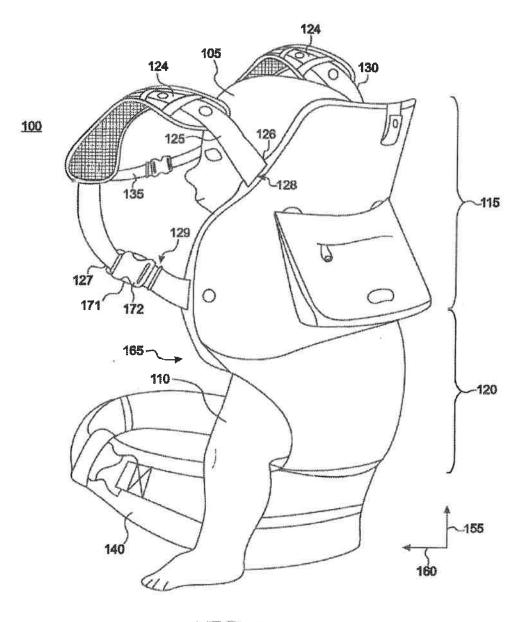


FIG. 2

Apr. 23, 2013

Sheet 3 of 15

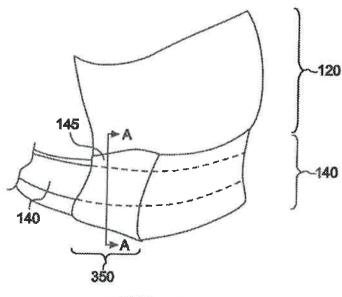


FIG. 3A

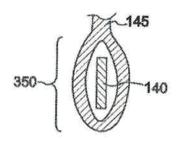


FIG. 3B

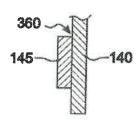


FIG. 3C

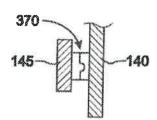


FIG. 3D

U.S. Patent Apr. 23, 2013 Sheet 4 of 15 US 8,424,732 B1

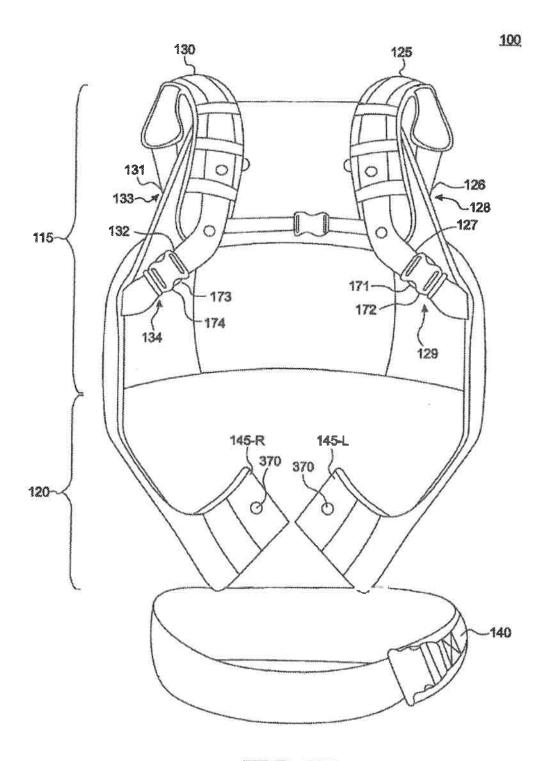


FIG. 3E

U.S. Patent Apr. 23, 2013 Sheet 5 of 15 US 8,424,732 B1

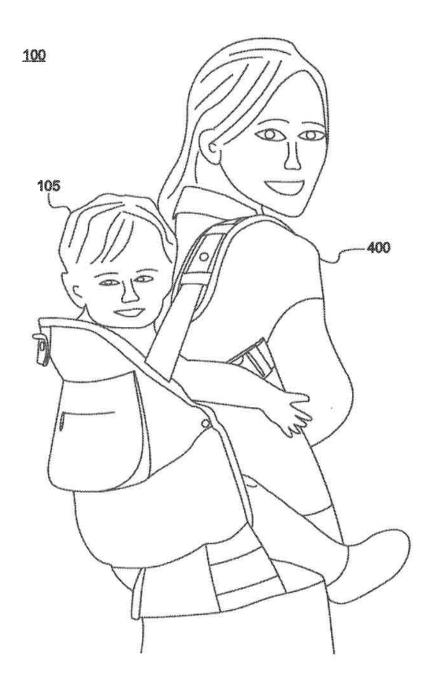


FIG. 4

Apr. 23, 2013 Sheet 6 of 15

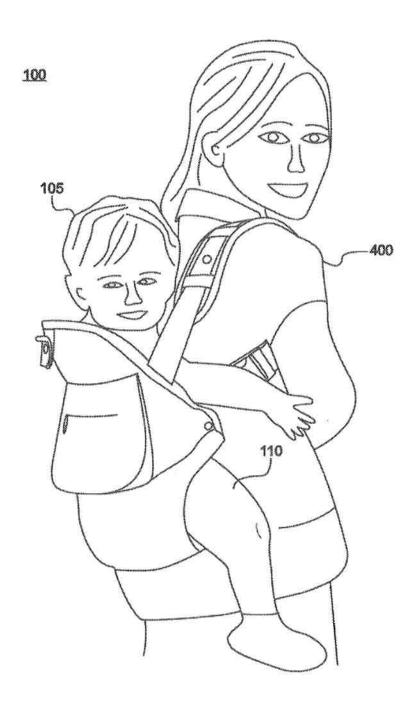


FIG. 5

U.S. Patent Apr. 23, 2013 Sheet 7 of 15 US 8,424,732 B1

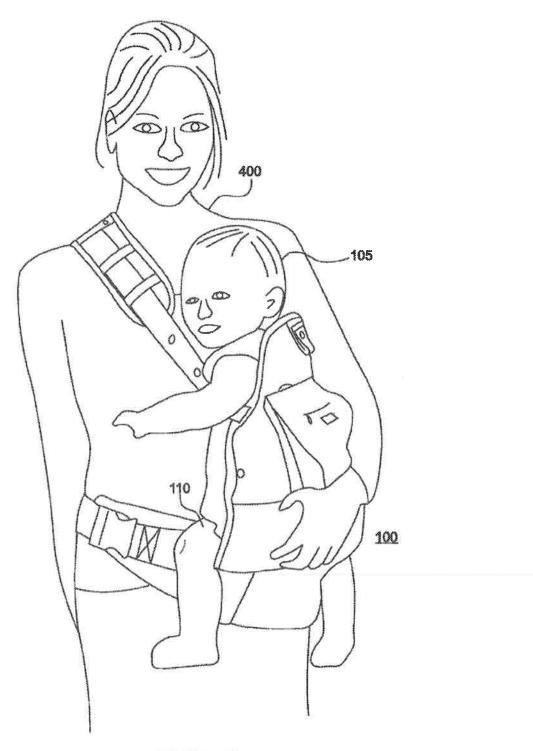


FIG. 6

U.S. Patent Apr. 23, 2013 Sheet 8 of 15 US 8,424,732 B1

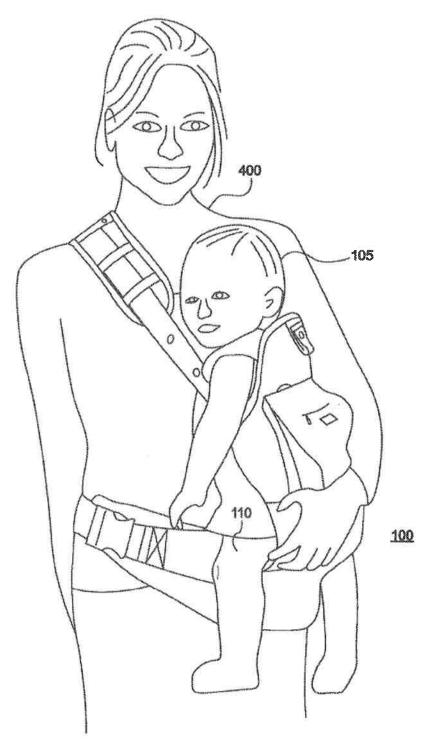


FIG. 7

U.S. Patent Apr. 23, 2013 Sheet 9 of 15 US 8,424,732 B1

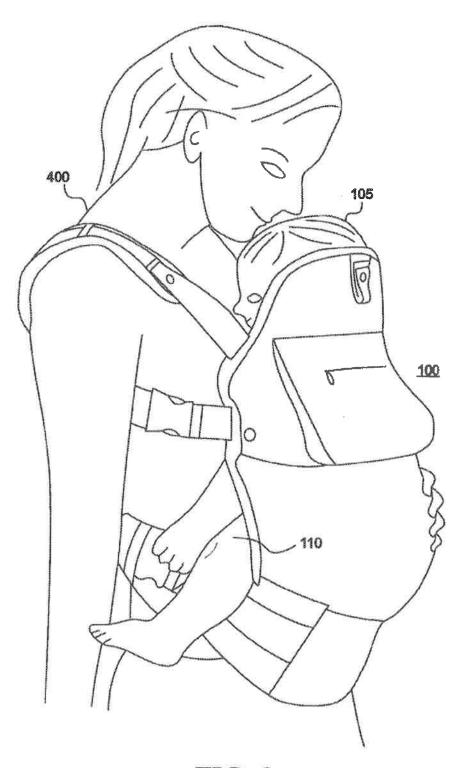


FIG. 8

U.S. Patent Apr. 23, 2013 Sheet 10 of 15 US 8,424,732 B1

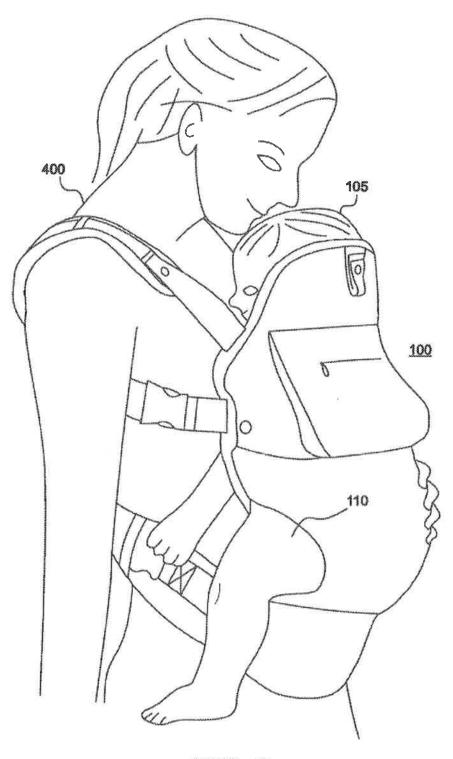


FIG. 9

U.S. Patent Apr. 23, 2013 Sheet 11 of 15 US 8,424,732 B1

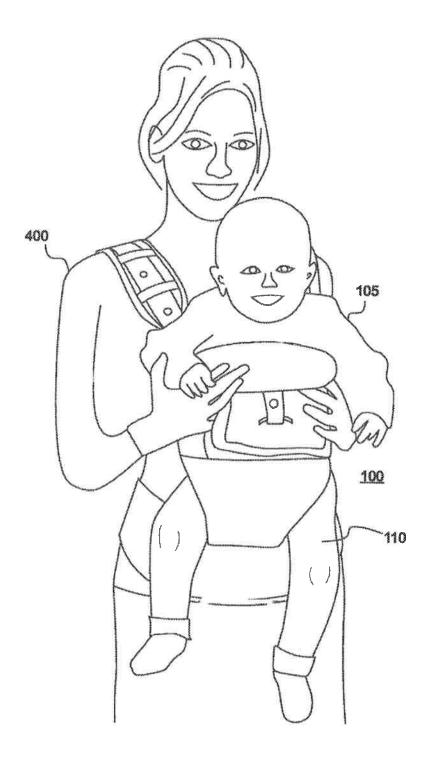


FIG. 10

Apr. 23, 2013

**Sheet 12 of 15** 

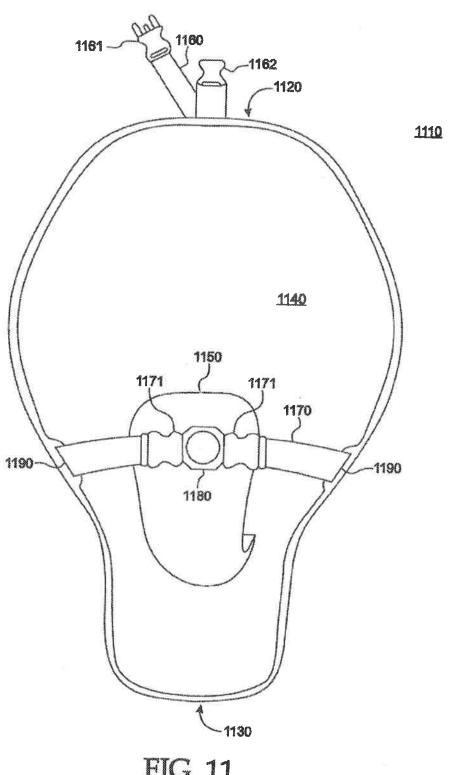


FIG. 11

U.S. Patent Apr. 23, 2013

Sheet 13 of 15

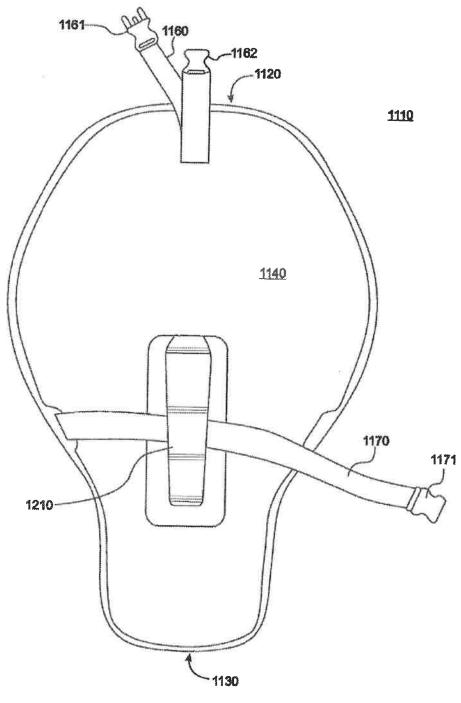


FIG. 12

U.S. Patent Apr. 23, 2013

Sheet 14 of 15

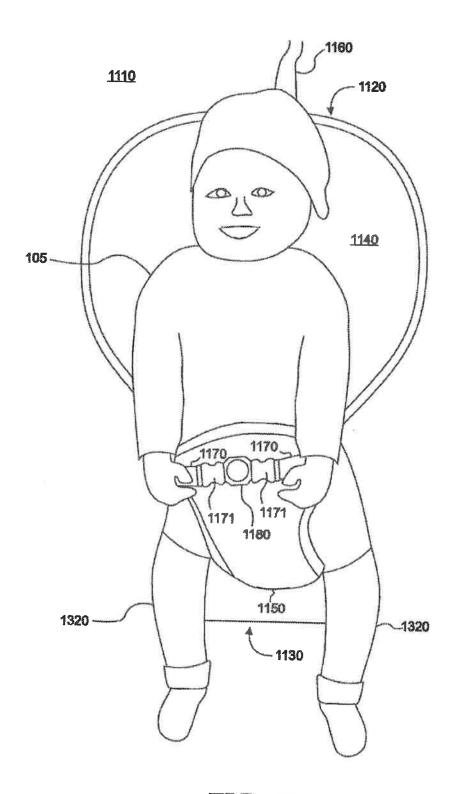


FIG. 13

Apr. 23, 2013 Sheet 15 of 15

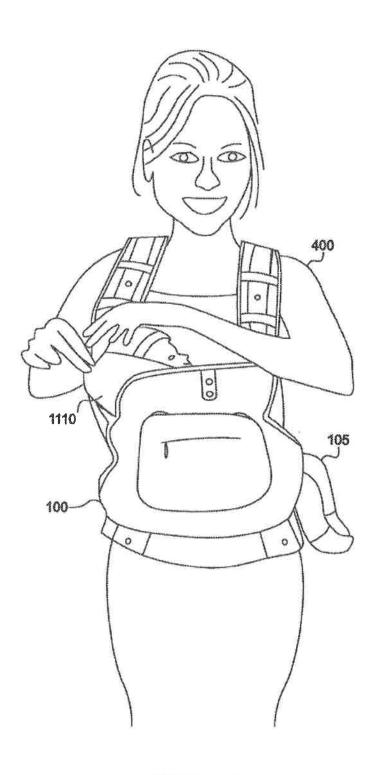


FIG. 14

#### US 8,424,732 B1

25

#### 1

#### CHILD CARRIER HAVING ADAPTIVE LEG SUPPORTS

### CROSS-REFERENCE TO RELATED APPLICATION

This application claims the priority of U.S. patent application Ser. No. 12/220,765 by Lisbeth Hals Lehan and Stephen Boyer Lehan, filed Jul. 28, 2008, and entitled "CHILD CARRIER HAVING ADAPTIVE LEG SUPPORTS" of which the entire contents are incorporated herein by reference.

#### BACKGROUND

Various infant carriers have been and are currently available for transporting a child by a parent or other individual. Each of the infant carriers is designed for a limited carrying mode, i.e., on the back, the front, or the hip of the parent. Each is also designed for a limited age, limited weight, and limited size of child to be carried in the carrier. The carriers available range from soft, light-weight carriers that snuggle the child to the front of the parent to larger carriers having metal frames intended for carrying the child on the parent's back.

#### BRIEF DESCRIPTION OF THE DRAWINGS

The accompanying drawings provide visual representations which will be used to more fully describe various representative embodiments and can be used by those skilled in 30 the art to better understand the representative embodiments disclosed and their inherent advantages. In these drawings, like reference numerals identify corresponding elements.

FIG. 1 is a drawing of a child carrier with an outline of a child in the child carrier with the upper legs of the child 35 supported as described in various representative embodiments.

FIG. 2 is a drawing of the child carrier with an outline of a child in the child carrier of FIG. 1 with the upper legs of the child unsupported.

FIG. 3A is a drawing of one of the upper-leg-support parts coupled to the hip belt of the child carrier of FIG. 1.

FIG. 3B is a drawing of the upper-leg-support part coupled to the hip belt of the child carrier at cross-section A-A of FIG. 3A.

FIG. 3C is a drawing of an alternative embodiment of the coupling of the upper-leg-support part to the hip belt of the child carrier of FIG. 3A.

FIG. 3D is a drawing of an alternative embodiment of the coupling of the upper-leg-support part to the hip belt of the 50 child carrier of FIG. 3A.

FIG. 3E is a drawing of an inside view of the child carrier of FIG. 1.

FIG. 4 is a drawing of the child carrier of FIG. 1 with the child carried on the back of a transporting individual, with the child facing toward the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 5 is a drawing of the child carrier of FIG. 1 with the child carried on the back of the transporting individual, with the child facing the transporting individual, and with the 60 child's upper legs (thighs) unsupported.

FIG. 6 is a drawing of the child carrier of FIG. 1 with the child carried on the hip of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 7 is a drawing of the child carrier of FIG. 1 with the child carried on the hip of the transporting individual, with the

#### 2

child facing the transporting individual, and with the child's upper legs (thighs) unsupported.

FIG. 8 is a drawing of the child carrier of FIG. 1 with the child carried in front of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) supported.

FIG. 9 is a drawing of the child carrier of FIG. 1 with the child carried in front of the transporting individual, with the child facing the transporting individual, and with the child's upper legs (thighs) unsupported.

FIG. 10 is a drawing of the child carrier of FIG. 1 with the child carried in front of the transporting individual, with the child facing away from the transporting individual, and with the child's upper legs (thighs) unsupported.

FIG. 11 is a drawing of a front view of a cradle insert as described in various representative embodiments.

FIG. 12 is a drawing of a back view of the cradle insert of FIG. 11.

FIG. 13 is a drawing of a child placed in the cradle insert of  $^{20}$  FIG. 11.

FIG. 14 is a drawing of the child carrier of FIG. 1 with the child carried in the cradle insert in a reclining position in front of the transporting individual.

#### DETAILED DESCRIPTION

As shown in the drawings for purposes of illustration, novel child carriers are disclosed herein that enable carrying the child in various positions including on the back, on the hip, and in front of an individual. In various configurations, the upper legs or thighs of the child can be supported proximately perpendicular to the body of the child. And in other configurations, the thighs of the child can hang proximately parallel to the body of the child. Dependent upon the size and weight of the child, the individual may find it more comfortable to carry the child in one of these configurations than in the others and/or the child may be more comfortable in one of these configurations than in the others. Previous carriers have been restricted in the configurations available for carrying the child.

In the following disclosure, when a child is described as being in a child carrier in a sitting position, a proximate sitting position, or an ergonomic sitting position, the thighs of the child are supported proximately perpendicular to the child's body with that part of the child's legs below his/her knees hanging generally downward. As used herein, the upper part of the child's legs means the child's thighs. When the child is described as being in the child carrier in a hanging position, the thighs of the child are for the most part unsupported with both the upper (thighs) and lower parts of the child's legs generally hanging downward. In the following detailed description and in the several figures of the drawings, like elements are identified with like reference numerals.

FIG. 1 is a drawing of a child carrier 100 with an outline of a child 105 in the child carrier 100 with the upper legs 110 of the child 105 supported as described in various representative embodiments. As referred to herein, the upper legs 110 of the child 105 are the child's thighs 110. The child carrier 100 comprises a torso support part 115, a seat support part 120, a left shoulder strap 125, a right shoulder strap 130, a chest strap 135, and a hip belt 140. The seat support part 120 comprises a left upper-leg-support part 145-L and a right upper-leg-support part 145-R. Upper-leg-support part 145 refers to the left upper-leg-support part 145-L, the right upper-leg-support part 145-R, or to both the left and the right upper-leg-support part 145-R. The right upper-leg-support part 145-R is hidden from view in FIG. 1 by the seat

3

support part 120 but is shown in FIG. 3E. A shoulder pad 124 is coupled to each shoulder strap 125,130, wherein each shoulder pad 124 is removable from its associated shoulder strap 125,130 and can be replaced or not replaced as desired.

The torso support part 115 is configured for supporting the back of the child 105 while in the carrier 100. The seat support part 120 is configured for supporting the posterior of the child 105 while in the carrier 100 and is coupled to the torso support part 115. The chest strap 135 can be used to secure the left and the right shoulder straps 125,130 together.

The left shoulder strap 125 has an upper left-strap end 126 and a lower left-strap end 127, and the right shoulder strap 130 has an upper right-strap end 131 and a lower right-strap end 132. The upper left-strap end 126 is coupled to the left side of the torso support part 115 at an upper left coupling 15 point 128 on the torso support part 115; the lower left-strap end 127 is coupled to the left side of the torso support part 115 at a lower left coupling point 129 on the torso support part 115; the upper right-strap end 131 is coupled to the right side of the torso support part 115 at an upper right coupling point 20 133 on the torso support part 115; and the lower right-strap end 132 is coupled to the right side of the torso support part 115 at a lower right coupling point 134 on the torso support part 115. Neither the upper right-strap end 131, the lower right-strap end 132, the upper right coupling point 133, nor 25 the lower right coupling point 134 are visible in FIG. 1 due to the presence of the torso support part 115 but are symmetrically located to that of respectively the upper left-strap end 126, the lower left-strap end 127, the upper left coupling point 128, and the lower left coupling point 129 and are shown in 30 FIG. 3E. The upper left coupling point 128 is located further from the seat support part 120 than is the lower left coupling point 129, and the upper right coupling point 133 is located further from the seat support part 120 than is the lower right coupling point 134.

The left shoulder strap 125 comprises a first fastener 171 at the lower left-strap end 127; the right shoulder strap 130 comprises a third fastener 173 at the lower right-strap end 132; the torso support part 115 comprises a second fastener 172 at the lower left coupling point 129; and the torso support 40 part 115 comprises a fourth fastener 174 at the lower right coupling point 134. The third fastener 173 and the fourth fastener 174 are hidden from view in FIG. 1 by the seat support part 120. The first fastener 171 and the second fastener 172 are configured such that they can be coupled 45 together resulting in the coupling of the left shoulder strap 125 to the torso support part 115. The third fastener 173 and the fourth fastener 174 are configured such that they can be coupled together resulting in the coupling of the right shoulder strap 130 to the torso support part 115. The first fastener 50 171 and the third fastener 173 are further configured such that they can be coupled to each other. In a representative embodiment, the first fastener 171 could be a male type fastening device, the second fastener 172 a female type fastening device, the third fastener 173 a female type fastening device, 55 and the fourth fastener 174 a male type fastening device. In another representative embodiment, the first fastener 171 could be a female type fastening device, the second fastener 172 a male type fastening device, the third fastener 173 a male type fastening device, and the fourth fastener 174 a female 60 type fastening device. The left and right shoulder straps 125, 130 are adjustable in length as are other items including, but not necessarily limited to, the chest strap 130 and the hip belt

The left upper-leg-support part 145-L is coupled to the left 65 side of the seat support part 120 and the right upper-leg-support part 145-R is coupled to the right side of the seat

support part 120; the seat support part 120 is coupled to the hip belt 140; the left upper-leg-support part 145-L is further configured for detachable coupling to the left side of the hip belt 140, and the right upper-leg-support part 145-R is further configured for detachable coupling to the right side of the hip belt 140. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140 as shown in FIG. 1, the carrier 100 is configured for supporting 10 the thighs 110 of the child 105 proximately perpendicular to the body 165 of the child 105. In this configuration, the child 105 is in a proximate sitting position. When the child 105 is in the child carrier 100 in a sitting position, a proximate sitting position, or an ergonomic sitting position, the thighs 110 of the child 105 are supported proximately perpendicular to the child's 105 body 165 with that part of the child's 105 legs below his/her knees hanging downward. The body 165 of the child is hidden from view in FIG. 1 due to the presence of the torso support part 115 and the seat support part 120. As will be indicated in the discussion of FIG. 2, if the left upper-legsupport part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105. In this configuration, the child 105 is in a proximate hanging position. When the child 105 is in the child carrier 100 in a hanging position, both the upper and lower part of the child's 105 legs are generally hanging downward. In FIG. 1, a vertical line 155 is proximately parallel to the body 165 of the child 105 and a horizontal line 160 is proximately perpendicular to the body 165 of the child 105.

FIG. 2 is a drawing of the child carrier 100 with an outline of a child 105 in the child carrier 100 of FIG. 1 with the upper legs 110 of the child 105 unsupported. Again as referred to herein, the upper legs 110 of the child 105 are the child's thighs 110. The child carrier 100 comprises the torso support part 115, the seat support part 120, the left shoulder strap 125, the right shoulder strap 130, the chest strap 135, and the hip belt 140. The seat support part 120 comprises the left upper-leg-support part 145-L, and the right upper-leg-support part 145-R is hidden from view in FIG. 2 by the seat support part 120 but is shown in FIG. 3E. A shoulder pad 124 is coupled to each shoulder strap 125,130, wherein each shoulder pad 124 is removable from its associated shoulder strap 125,130 and can be replaced or not replaced as desired.

The torso support part 115 is configured for supporting the back of the child 105 while in the carrier 100. The seat support part 120 is configured for supporting the posterior of the child 105 while in the carrier 100 and is coupled to the torso support part 115.

The left shoulder strap 125 has an upper left-strap end 126 and a lower left-strap end 127, and the right shoulder strap 130 has an upper right-strap end 131 and a lower right-strap end 132. The upper left-strap end 126 is coupled to the left side of the torso support part 115 at an upper left coupling point 128 on the torso support part 115; the lower left-strap end 127 is coupled to the left side of the torso support part 115 at a lower left coupling point 129 on the torso support part 115; the upper right-strap end 131 is coupled to the right side of the torso support part 115 at an upper right coupling point 133 on the torso support part 115; and the lower right-strap end 132 is coupled to the right side of the torso support part 115 at a lower right coupling point 134 on the torso support part 115. Neither the upper right-strap end 131, the lower right-strap end 132, the upper right-coupling point 133, nor

the lower right coupling point 134 are visible in FIG. 2 due to the presence of the torso support part 115 but are symmetrically located to that of respectively the upper left-strap end 126, the lower left-strap end 127, the upper left coupling point 128, and the lower left coupling point 129 and are shown in 5 FIG. 3E. The upper left coupling point 128 is located further from the seat support part 120 than is the lower left coupling point 129, and the upper right coupling point 133 is located further from the seat support part 120 than is the lower right coupling point 134.

The left shoulder strap 125 comprises a first fastener 171 at the lower left-strap end 127; the right shoulder strap 130 comprises a third fastener 173 at the lower right-strap end 132; the torso support part 115 comprises a second fastener 15 172 at the lower left coupling point 129; and the torso support part 115 comprises a fourth fastener 174 at the lower right coupling point 134. The third fastener 173 and the fourth fastener 174 are hidden from view in FIG. 1 by the seat support part 120. The first fastener 171 and the second fas- 20 tener 172 are configured such that they can be coupled together resulting in the coupling of the left shoulder strap 125 to the torso support part 115. The third fastener 173 and the fourth fastener 174 are configured such that they can be coupled together resulting in the coupling of the right shoul- 25 der strap 130 to the torso support part 115. The first fastener 171 and the third fastener 173 are further configured such that they can be coupled to each other. In a representative embodiment, the first fastener 171 could be a male type fastening device, the second fastener 172 a female type fastening 30 device, the third fastener 173 a female type fastening device, and the fourth fastener 174 a male type fastening device. In another representative embodiment, the first fastener 171 could be a female type fastening device, the second fastener type fastening device, and the fourth fastener 174 a female type fastening device. The left and right shoulder straps 125, 130 are adjustable in length as are other items including, but not necessarily limited to, the chest strap 130 and the hip belt

The left upper-leg-support part 145-L is coupled to the left side of the seat support part 120 and the right upper-legsupport part 145-R is coupled to the right side of the seat support part 120; the seat support part 120 is coupled to the hip belt 140; the left upper-leg-support part 145-L is further 45 configured for detachable coupling to the left side of the hip belt 140, and the right upper-leg-support part 145-R is further configured for detachable coupling to the right side of the hip belt 140. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support 50 part 145-R is coupled to the right side of the hip belt 140 as shown in FIG. 1, the carrier 100 is configured for supporting the thighs 110 of the child 105 proximately perpendicular to the body 165 of the child 105. In this configuration, the child 105 is in a proximate sitting position. The body 165 of the 55 child is hidden from view in FIG. 1 due to the presence of the torso support part 115 and the seat support part 120. As shown in FIG. 2, if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-legsupport part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105. In this configuration, the child 105 is in a proximate hanging position. In FIG. 2, a vertical line 155 is proximately parallel to the body 165 of the child 105 and a 65 horizontal line 160 is proximately perpendicular to the body 165 of the child 105.

FIG. 3A is a drawing of one of the upper-leg-support parts 145 coupled to the hip belt 140 of the child carrier 100 of FIG.

1. In FIG. 3A, a portion of the hip belt 140 is passed through a sleeve 350 which provides coupling of the upper-leg-support part 145 to the hip belt 140 and thereby support of one of the upper legs (thighs) 110 of the child 105 when the child 105 is placed in the carrier 100. Both the upper-leg-support part 145 and the hip belt 140 are shown coupled to the seat support part 120 of the carrier 100.

FIG. 3B is a drawing of the upper-leg-support part 145 coupled to the hip belt 140 of the child carrier 100 at cross-section A-A of FIG. 3A. In FIG. 3B, the hip belt 140 is shown inside the sleeve 350 coupled to the upper-leg-support part 145.

FIG. 3C is a drawing of an alternative embodiment of the coupling of the upper-leg-support part 145 to the hip belt 140 of the child carrier 100 of FIG. 3A. In FIG. 3C, the upper-leg-support part 145 is coupled to the hip belt 140 via mating areas of a hook and loop type fastener 360 on the upper-leg-support part 145 and the hip belt 140.

FIG. 3D is a drawing of an alternative embodiment of the coupling of the upper-leg-support part 145 to the hip belt 140 of the child carrier 100 FIG. 3A. In FIG. 3D, the upper-leg-support part 145 is coupled to the hip belt 140 via mating snaps 370 on the upper-leg-support part 145 and the hip belt 140.

FIG. 3E is a drawing of an inside view of the child carrier 100 of FIG. 1. In FIG. 3E, left and right upper-leg-support parts 145-L,145-R are shown folded into the inside of the seat support part 120 of the child carrier 100 for storage when not in use in supporting the thighs 110 of the child 105. A pair of mating snaps 370, one on the left upper-leg-support part 145-L and one on the left inside side of the seat support part 120, similar to that shown in FIG. 3D could be used to 172 a male type fastening device, the third fastener 173 a male 35 securely stow the left upper-leg-support part 145-L, and another pair of mating snaps 370, one on the right upper-legsupport part 145-R and one on the right inside side of the seat support part 120 could be used to securely stow the right upper-leg-support part 145-R. Also shown in FIG. 3E are the torso support part 115, the hip belt 140, the left and the right shoulder straps 125,130, the upper and the lower left-strap ends 126,127, the upper and the lower left coupling points 128,129, the upper and the lower right-strap ends 131,132, the upper and the lower right coupling point 133,134, and the first, the second, the third, and the fourth fasteners 171,172, 173,174. As can be seen in FIG. 3E, when the left and right upper-leg-support parts 145-L,145-R are not in use in supporting the thighs 110 of the child 105 a part of the seat support part 120 on both the left and the right sides also may become unavailable for supporting the seat of the child 105.

FIG. 4 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the back of a transporting individual 400, with the child 105 facing toward the transporting individual 400, and with the child's upper legs (thighs) 110 supported. Neither of the child's 105 upper legs 110 are not visible in FIG. 4.

FIG. 5 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the back of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported.

FIG. 6 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the hip of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 supported. In FIG. 6, the first fastener 171 is coupled to the third fastener 173. The first fastener 171 could be a male type fastening

device with the third fastener 173 being a female type fastening device, or the first fastener 171 could be a female type fastening device with the third fastener 173 being a male type fastening device. The left and the right shoulder straps 125, 130 can be adjusted in length as appropriate.

FIG. 7 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried on the hip of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported. As in FIG. 6, the first fastener 171 of FIG. 7 is coupled to the third 10 fastener 173. The first fastener 171 could be a male type fastening device with the third fastener 173 being a female type fastening device, or the first fastener 171 could be a female type fastening device with the third fastener 173 being a male type fastening device. The left and the right shoulder 15 straps 125,130 can be adjusted in length as appropriate.

FIG. 8 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in front of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 supported.

FIG. 9 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in front of the transporting individual 400, with the child 105 facing the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported.

FIG. 10 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in front of the transporting individual 400, with the child 105 facing away from the transporting individual 400, and with the child's upper legs (thighs) 110 unsupported.

FIG. 11 is a drawing of a front view of a cradle insert 1110 30 as described in various representative embodiments. The cradle insert 1110 can be used with the child carrier 100 to transport a younger child 105, such as an infant, in a reclining position. The cradle insert 1110 has a head end 1120 and a foot end 1130 and comprises a pad 1140, a crotch support 35 1150 coupled to the pad 1140, a first attachment strap 1160 coupled to the pad 1140, a second attachment strap 1170 coupled to the pad 1140, and a strap receptacle 1180 coupled to the crotch support 1150. Affixed to the ends of the first attachment strap 1160 are a first and a second clasps 1161, 40 1162 which are attachable to each other. With the crotch support 1150 placed between the child's 105 legs, the cradle insert 1110 can be secured to the child 105 by coupling each of the two second-attachment-strap ends 1171 of the second attachment strap 1170 to the strap receptacle 1180. The sec- 45 ond attachment strap 1170 is held in place by passing it around the pad 1140 and through holes 1190.

FIG. 12 is a drawing of a back view of the cradle insert 1110 of FIG. 11. In FIG. 12, the second attachment strap 1170 is shown coupled to an attachment loop 1210 by passing the second attachment strap 1170 through the attachment loop 1210. In other representative embodiments, various other devices could be used for securing the child 105 to the pad 1140.

FIG. 13 is a drawing of a child 105 placed in the cradle insert 1110 of FIG. 11. FIG. 13 shows the crotch support 1150 placed between the child's 105 legs 1320. The cradle insert 1110 is secured to the child 105 by coupling each of the two second-attachment-strap ends 1171 of the second attachment strap 1170 to the strap receptacle 1180 coupled to the crotch support 1150. As stated above, the second attachment strap 1170 is held in place by passing it around the pad 1140 and through holes 1190. The cradle insert 1110 can be secured to the child carrier 100 by encircling one of the shoulder straps 125,130 with the first attachment strap 1160 and coupling the first clasp 1161 to the second clasp 1162. An additional attachment device (not shown in the figures) can be disposed

on the inside of the child carrier 100 for coupling with the attachment loop 1210 on the cradle insert 1110. This additional attachment device on the child carrier 100 along with the paired attachment loop 1210 on the cradle insert 1110 provide a second coupling mechanism and, thus, enable more secure coupling of the cradle insert 1110 to the child carrier 100

FIG. 14 is a drawing of the child carrier 100 of FIG. 1 with the child 105 carried in the cradle insert 1110 in a reclining position in front of the transporting individual 400. In FIG. 14, the transporting individual 400 is shown carrying the child 105 using the cradle insert 1110 in the child carrier 100. The child 105 is in a reclining position within the cradle insert 1110.

The seat support part 120 of the child carrier 100 can be formed having a general cup shape conforming to the general shape of the child's 105 posterior thereby providing more comfortable support. If the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140, the carrier 100 is configured for supporting the child 105 in an ergonomic sitting position wherein the thighs 110 of the child 105 are supported proximately perpendicular to the child's 105 body 165 with that part of the child's 105 legs below his/her knees hanging downward. Alternately, if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured such that the seat support part 120 converts to a narrower seat area thereby enabling the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105. This configuration can be used for a younger child 105 that is not large enough for his/her legs to wrap around the transporting individual 400 which could be, for example, a parent or other person sufficiently strong to carry the child 105 in the child carrier 100. Depending upon the situation, the various carrying configurations of the child carrier 100 enable the transporting individual 400 to select the most appropriate configuration for carrying the child 105, i.e., with the child 105 carried on the back, the hip, or the front of the transporting individual 400, with the child facing away from or toward the transporting individual 400, and with the child 105 in the sitting or hanging position as appropriate. One or another configuration may suit a particular child 105 and/or transporting individual 400 better than the others. For example, a younger child 105 may find it more comforting to be carried on the front of the transporting individual 400 and be more comfortable with his/her thighs 110 hanging proximately parallel to the child's 105 body 165. For a sleeping infant, carrying the child 105 on the front of the transporting individual 400 in the cradle insert 1110 may be the most comfortable for the child 105. However, for carrying an older and therefore larger child 105, carrying the child 105 on the back or hip of the transporting individual 400 and be more comfortable. To reduce fatigue, the transporting individual 400 may choose to switch between configurations.

Appropriate attachment of the two shoulder straps 125,130 enables transporting the child 105 on the front, on the back, or on the hip of the transporting individual 400. The coupling of the seat support part 120 to the hip belt 140 helps absorb the movement and weight of the child 105, eases the strain on the back of the transporting individual 400, and provides a smoother ride for both the transporting individual 400 and the child 105.

In various representative embodiments, removable shoulder pads and/or interchangeable shoulder pads can be used

with the shoulder straps 125,130. Such shoulder pads could be filled with a gel to enhance the comfort of the transporting individual 400. Other elements such as pockets to hide buckles when the carrier 100 is used as a one-carrying-strap hip carrier, expandable pockets, and/or a removable hood for the 5 child 105 could be used to add to the functionality of the carrier 100.

In a representative embodiment, the cradle insert 1110 enables the carrier 100 to be used with infants such as a newborn child 105 since a newborn child should always be 10 carried in a horizontal position to reduce strain on the infant's back. Using the cradle insert 1110 as a part of the carrier 100 can be used to extend the useful life of the carrier 100 for a given child 105.

The hip belt 140 of the carrier 100 can be padded and can 15 enable carrying the child 105 on the front, the back, or the hip of the transporting individual 400. With the child 105 sitting in the carrier 100 and the left and right upper-leg-support parts 145-L,145-R coupled to the hip belt 140, the upper part of the legs 110 form a proximate 90 degrees angle to the hip 20 of the child 105 and also form a proximate 90 degrees angle to the lower legs of the child 105 at the child's knees. This position is a more natural sitting position for the child 105 than the position in which the child's legs are hanging straighter and down proximate parallel to the vertical. How- 25 ever, the child 105 can also be carried with his/her legs hanging straighter and down. In this mode, the left and right upper-leg-support parts 145-L,145-R can be removed, folded inward toward the seat support part 120, or allowed to hang

Pockets can be added to the carrier 100 for storing the second and the fourth fasteners 172,174 when they are not otherwise coupled to other items. Various other pockets can also be added for carrying miscellaneous items, and a removable or permanent hood can be added for protecting the 35 child's head.

In representative embodiments, child carriers 100 are disclosed herein that enable carrying the child 105 in various positions including on the back, on the hip, or in front of an individual 400. In various configurations, the upper legs 110 40 or thighs 110 of the child 105 can be supported proximately perpendicular to the body 165 of the child 105. And in other configurations, the thighs 110 of the child 105 can hang proximately parallel to the body 165 of the child 105. Dependent upon the size and weight of the child 105, the individual 45 400 may find it more comfortable to carry the child 105 in one of these configurations than in the others and/or the child 105 may be more comfortable in one of these configurations than in the others.

The multiple options both for the transporting individual 50 400 and the multiple options for the child's 105 sitting/hanging positions provide for a long useful lifespan of a given implementation of the carrier 100 since the carrying position can be adjusted to the most comfortable and ergonomic carrying position depending upon the child's 105 weight and 55 age. The transporting individual 400 can choose their own preferred configuration for carrying the child 105 and, if desired, alternate or change carrying positions/configurations at any time dependent upon the situation. Children 105, from a newborn child 105 up to a heavy child 105, can be carried by 60 a transporting individual 400 limited only by the strength of the transporting individual 400.

The configuration needs for a carrier 100 can also change depending upon the situation. When hiking or walking the transporting individual 400 may prefer to carry the child 105 65 vidual, comprising: on his or her back. But, when in a crowded area such as a store or on a city street, the transporting individual 400 may prefer

to carry the child 105 on his/her hip or in front to have more control over the child's 105 activities. If the child 105 is tired, a position supporting sleeping, such as a horizontal position or facing the transporting individual 400 may be preferred. If the child 105 is alert, facing the child 105 forward away from the transporting individual 400 may be the preferred configuration as this configuration could allow the child 105 to look around without the child 105 twisting his/her neck.

In a representative embodiment, a carrier 100 for transporting a child 105 by a transporting individual 400 is disclosed. The carrier 100 comprises a torso support part 115 configured for supporting the torso of the child 105, a seat support part 120 coupled to the torso support part 115, and at least one strap 125,130 coupled to the torso support part 115 and/or to the seat support part 120 and with the torso support part 115 and the seat support part 120 configured to encircle at least part of the torso of the transporting individual 400. The seat support part 120 is configured for supporting the posterior of the child 105 in a sitting position in a first configuration, and the seat support part 120 is configured for supporting the posterior of the child 105 in a hanging position in a second configuration.

In another representative embodiment, a carrier 100 for transporting a child 105 is disclosed. The carrier 100 comprises a torso support part 115 configured for supporting the torso of the child 105, a left shoulder strap 125 having an upper and a lower left-strap ends 126,127 configured for coupling to the torso support part 115 at respectively an upper left coupling point 128 and a lower left coupling point 129 on the torso support part 115, a right shoulder strap 130 having an upper and a lower right-strap ends 131,132 configured for coupling to the torso support part 115 at respectively an upper right coupling point 133 and a lower right coupling point 134 on the torso support part 115, a seat support part 120 coupled to the torso support part 115 and configured for supporting the posterior of the child 105, and a hip belt 140 coupled to the seat support part 120. The torso support part 115 includes a left upper-leg-support part 145-L disposed on the left side of the seat support part 120 and a right upper-leg-support part 145-R disposed on the right side of the seat support part 120; the left upper-leg-support part 145-L is further configured for coupling to the left side of the hip belt 140; the right upperleg-support part 145-R is further configured for coupling to the right side of the hip belt 140; if the left upper-leg-support part 145-L is coupled to the left side of the hip belt 140 and the right upper-leg-support part 145-R is coupled to the right side of the hip belt 140, the carrier 100 is configured for supporting the thighs 110 of the child 105 proximately perpendicular to the body 165 of the child 105; and if the left upper-leg-support part 145-L is decoupled from the left side of the hip belt 140 and the right upper-leg-support part 145-R is decoupled from the right side of the hip belt 140, the carrier 100 is configured to enable the thighs 110 of the child 105 to hang proximately parallel to the body 165 of the child 105.

The representative embodiments, which have been described in detail herein, have been presented by way of example and not by way of limitation. It will be understood by those skilled in the art that various changes may be made in the form and details of the described embodiments resulting in equivalent embodiments that remain within the scope of the appended claims.

What is claimed is:

- 1. A carrier for transporting a child by a transporting indi
  - a torso support part configured for supporting at least part of the torso of the child if the child is seated in the carrier;

- a seat support part coupled to the torso support part and configured for supporting the posterior of the child; and
- a hip belt coupled to the seat support part and configured for securing about the hips of the transporting indi
  - wherein the seat support part is configured for enabling one or both upper legs of the child to hang substantially unsupported,
- wherein in at least one alternative configuration at least one upper-leg-support part is coupled to the seat sup- 10 port part and to the hip belt and is configured for supporting at least part of one or both upper legs of the child, and
- wherein at least one of the upper-leg-support parts comprises a sleeve and wherein the at least one of the 15 upper-leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the upper legs of the child.
- 2. The carrier as recited in claim 1, wherein the carrier is 20 configurable to enable carrying the child in at least one of the following positions: on the back, on the hip, or on the front of the transporting individual.
- 3. The carrier as recited in claim 2, wherein the carrier is configurable for carrying the child in at least one of the 25 following orientations: facing toward the transporting individual, facing sideways to the transporting individual, or facing away from the transporting individual.
- 4. A carrier for transporting a child by a transporting individual, comprising:
  - a torso support part configured for supporting at least part of the torso of the child if the child is seated in the carrier;
  - a seat support part coupled to the torso support part and configured for supporting the posterior of the child; and
  - a hip belt coupled to the seat support part and configured 35 for securing about the hips of the transporting individual.
    - wherein if at least one upper-leg-support part is coupled to the seat support part and to the hip belt, the at least one upper-leg-support part so coupled is configured 40 for supporting at least part of one or both upper legs of the child, otherwise, the seat support part is configured for enabling one or both upper legs of the child to hang substantially unsupported and
    - wherein at least one of the upper-leg-support parts com- 45 prises a sleeve and wherein the at least one of the upper-leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the upper legs of the child.
- 5. The carrier as recited in claim 4, wherein the carrier is configurable to enable carrying the child in at least one of the following positions: on the back, on the hip, or on the front of the transporting individual.
- 6. The carrier as recited in claim 5, wherein the carrier is 55 configurable for carrying the child in at least one of the following orientations: facing toward the transporting individual, facing sideways to the transporting individual, or facing away from the transporting individual.
- vidual, comprising:
  - a torso support part configured for supporting at least part of the torso of the child if the child is seated in the carrier;
  - a seat support part coupled to the torso support part and configured for supporting the posterior of the child;
  - at least one upper-leg-support part coupled to the seat support part; and

12

- a hip belt coupled to the seat support part and configured for securing about the hips of the transporting indi
  - wherein at least one of the upper-leg-support parts comprises a sleeve and wherein the at least one of the upper-leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the upper legs of the child and
- wherein if the at least one upper-leg-support part is further coupled to the hip belt, the upper-leg-support part so coupled is configured for supporting at least part of one or both upper legs of the child, otherwise the seat support part is configured for enabling one or both upper legs of the child to hang substantially unsup-
- 8. The carrier as recited in claim 7, wherein the carrier is configurable to enable carrying the child in at least one of the following positions: on the back, on the hip, or on the front of the transporting individual.
- 9. The carrier as recited in claim 8, wherein the carrier is configurable for carrying the child in at least one of the following orientations: facing toward the transporting individual, facing sideways to the transporting individual, or facing away from the transporting individual.
- 10. A carrier for transporting a child by a transporting individual, comprising:
  - a torso support part configured for supporting at least part of the torso of the child placed in the carrier;
- a seat support part coupled to the torso support part and configured to support the posterior of the child, wherein the seat support part comprises a left upper-leg-support part disposed on the left side of the seat support part and a right upper-leg-support part disposed on the right side of the seat support part; and
- a hip belt coupled to the seat support part and configured for securing about the hips of the transporting indi
  - wherein the left upper-leg-support part is configured for optionally coupling to the left side of the hip belt, wherein the right upper-leg-support part is configured for optionally coupling to the right side of the hip belt,
  - wherein if the left upper-leg-support part is coupled to the left side of the hip belt, the left upper-leg-support part is configured to support at least part of the left upper leg of the child, otherwise the left upper-legsupport part does not substantially support the left upper leg of the child, and
  - wherein if the right upper-leg-support part is coupled to the right side of the hip belt, the right upper-legsupport part is configured to support at least part of the right upper leg of the child, otherwise the right upperleg-support part does not support the right upper leg of the child.
- 11. The carrier as recited in claim 10, wherein the carrier is configurable to enable carrying the child in at least one of the following positions: on the back, on the hip, or on the front of the transporting individual.
- 12. The carrier as recited in claim 11, wherein if the carrier 7. A carrier for transporting a child by a transporting indi- 60 is configured for carrying the child on the front of the transporting individual, the carrier is configurable for carrying the child in at least one of the following orientations: facing toward the transporting individual, facing sideways to the transporting individual, or facing away from the transporting individual.
  - 13. The carrier as recited in claim 10, wherein at least one of the upper-leg-support parts comprises a sleeve and wherein

US 8,424,732 B1

**13** 

the at least one of the upper-leg-support parts can be coupled to the hip belt by passing a portion of the hip belt through the sleeve opening providing, thereby, at least partial support for one of the upper legs of the child.

14. The carrier as recited in claim 10, wherein at least one 5

14. The carrier as recited in claim 10, wherein at least one of the upper-leg-support parts is coupled to the hip belt by one or more fastening devices selected from the group consisting of mating areas of a hook and loop type fastener on that upper-leg-support part and the hip belt and mating snaps on that upper-leg-support part and the hip belt.

14

## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO.

: 8,424,732 B1

APPLICATION NO.

: 13/429327

DATED

: April 23, 2013

INVENTOR(S)

: Lehan

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page

Item (76) inventors should read:

(76) Inventors: Lisbeth Hals Lehan, Niwot, CO (US)

Signed and Sealed this Twenty-fifth Day of September, 2018

Page 1 of 1

Andrei Iancu

Director of the United States Patent and Trademark Office

# EXHIBIT 3

#### **EXHIBIT 5.11**

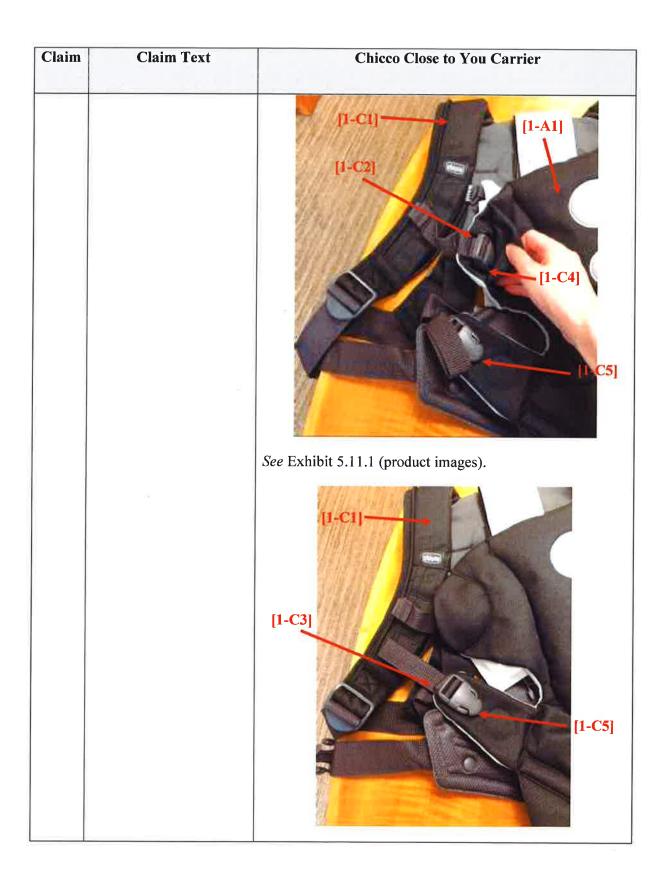
#### Claim Chart for Infringement of U.S. Patent No. 8,172,116 by the Chicco Close to You Carrier

This chart describes infringement of U.S. Patent No. 8,172,116 patent ("the '116 patent") by the Chicco Close to You Carrier ("Close to You") as an exemplary product. The Close to You infringes the specified claims literally and under the doctrine of equivalents. The infringement analysis in this chart is preliminary and Complainant's investigation is ongoing. Complainant reserves the right to provide additional theories under which Respondent's products infringe the '116 patent, or evidence to support its current theories, upon obtaining discovery from Respondent.

Claim	Claim Text	Chicco Close to You Carrier
1	A carrier for transporting a child by a transporting individual, comprising:	The Close to You is a carrier for transporting a child by a transporting individual.  Child  Transporting individual  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
1[a]	a torso support part [1-A1] configured to support the torso of the child placed in the carrier;	[1-A1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
1[b]	a left shoulder strap [1-B1] having an upper [1-B2] and a lower [1-B3] left-strap ends configured for coupling to the torso support part [1-A1] at respectively an upper left coupling point [1-B4] and a lower left coupling point [1-B5] on the torso support part [1-A1];	[1-B4] [1-B2] [1-B3]  [1-B5] See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[1-B1] [1-B4] [1-A1] See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
		[1-A1]  See Exhibit 5.11.1 (product images).
1[c]	a right shoulder strap [1-C1] having an upper [1-C2] and a lower [1-C3] right-strap ends configured for coupling to the torso support part [1-A1] at respectively an upper right coupling point [1-C4] and a lower right coupling point [1-C5] on the torso support part [1-A1];	[1-C1] [1-C2] [1-C3] [1-C5]
		See www.amazon.com/chicco-close-you-carrier- black/dp/B01BH2DYLG.



EX. 5.11 - Page 5 of 48

Claim	Claim Text	Chicco Close to You Carrier
		See Exhibit 5.11.1 (product images).
1[d]	a seat support part [1-D1] coupled to the torso support part [1-A1] and configured to support the posterior of the child, wherein the seat support part [1-D1] comprises a left upper-leg-support part [1-D2] disposed on the left side of the seat support part and configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part [1-D3] disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child and otherwise not support the right thigh of the child; and	"configurable to optionally support at least part of the [] thigh of the child":  [1-A1]  [1-D2]  See Exhibit 5.11.1 (product images).  [1-D3]  [1-D1]  [1-D1]  [1-D1]

EX. 5.11 - Page 6 of 48

Claim	Claim Text	Chicco Close to You Carrier
		See  www.xcite.com/wishlist/index/add/product/64462/form_key /2DGXSOcJQCTflo5j.
		"otherwise not support the [] thigh of the child":  [1-D1]  [1-D2]
		See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
		[1-A1] [1-D1] [1-D3]  See www.youtube.com/watch?v=f2AzpEzA_E.
1[e]	a hip belt [1-E1] coupled to the seat support part [1-D1] and configured for securing about the hips of the transporting individual,	[1-E1]  See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
1[f]	wherein at least one of the upper leg-support parts [1-D2 or 1-D3] is coupled to the hip belt [1-E1] by a fastening device [1-F1] selected from the group consisting of mating areas of a hook and loop type fastener on that upper-leg-support part and the hip belt and mating snaps [1-F2] on that upper-leg-support part and the hip belt.	[1-F1]  [1-F2]  [1-E1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[1-D2] [1-F1] [1-F2]  See Exhibit 5.11.1 (product images).
2	The carrier as recited in claim 1, further comprising:	See above analysis.

Claim	Claim Text	Chicco Close to You Carrier
2[a]	a first fastener [2-A1] coupled to the left shoulder strap [1-B1] proximate the lower left-strap end [1-B3];	[1-B1] [1-B3] [2-A1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[2-A1] [1-B3]
		See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
2[b]	a second fastener [2-B1] coupled to the torso support part [1-A1] proximate the lower left coupling point [1-B5], wherein the first fastener [2-A1] is configured for coupling to the second fastener [2-B1];	[1-A1] [1-B5] [2-A1] [2-B1]  See www.amazon.com/chicco-close-you-carrier-
		black/dp/B01BH2DYLG.  [2-A1]  [1-A1]
		See Exhibit 5.11.1 (product images).

third fastener [2-C1] oupled to the right houlder strap [1-C1] roximate the lower ight-strap end [1-C3]; nd	[1-C1]
	[1-C3]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
	[1-C1] [2-C1] See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
2[d]	a fourth fastener [2-D1] coupled to the torso support part [1-A1] proximate the lower right coupling point [1-C5], wherein the third fastener [2-C1] is configured for coupling to the fourth fastener [2-D1].	[2-C1] [2-D1] [3-C5]  See Exhibit 5.11.1 (product images).
5	The carrier as recited in claim 1,	See above analysis.
5[a]	wherein the carrier is configurable to enable carrying the child in one of at least two of the following positions: on the back [5-A1], on the hip, or on the front [5-A2] of the transporting individual.	"Front carry facing in from 7.5lbs with infant footrests to keep baby's legs drawn up"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.  "Back carry for babies who can sit upright unassisted"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[5-A1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[5-A2]  See www.amazon.com/chicco-close-you-carrier-
		black/dp/B01BH2DYLG.

EX. 5.11 - Page 14 of 48

Claim	Claim Text	Chicco Close to You Carrier
6	The carrier as recited in claim 5,	See above analysis.
6[a]	wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual [6-A1],	See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
6[b]	wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual,	

Claim	Claim Text	Chicco Close to You Carrier
6[c]	and wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual [6-C1] or facing away from the transporting individual [6-C2].	[6-C1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[6-C2]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
9	A carrier for transporting a child by a transporting individual, comprising:	The Close to You is a carrier for transporting a child by a transporting individual.

Claim	Claim Text	Chicco Close to You Carrier
	5.	Child Transporting individual  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
9[a]	a torso support part [9-A1] configured to support the torso of the child placed in the carrier;	[9-A1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
9[b]	a left shoulder strap [9-B1] having an upper [9-B2] and a lower [9-B3] left-strap ends configured for coupling to the torso support part [9-A1] at respectively an upper left coupling point [9-B4] and a lower left coupling point [9-B5] on the torso support part [9-A1];	[9-B4] [9-B1] [9-B2] [9-B3]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[9-B1] [9-B4] [9-A1] See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
		[9-B3]  [9-B5]  See Exhibit 5.11.1 (product images).
9[c]	a right shoulder strap [9-C1] having an upper [9-C2] and a lower [9-C3] right-strap ends configured for coupling to the torso support part [9-A1] at respectively an upper right coupling point [9-C4] and a lower right coupling point [9-C5] on the torso support part [9-A1];	[9-C1] [9-C2] [9-C4] [9-C5]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[9-C1] [9-C2] [9-C4] [9-C4]
		See Exhibit 5.11.1 (product images).
		[9-C3]

EX. 5.11 - Page 20 of 48

Claim	Claim Text	Chicco Close to You Carrier
		See Exhibit 5.11.1 (product images).
9[d]	a seat support part [9-D1] coupled to the torso support part [9-A1] and configured to support the posterior of the child, wherein the seat support part [9-D1] comprises a left upper-leg-support part [9-D2] disposed on the left side of the seat support part and configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part [9-D3] disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child and otherwise not support the right thigh of the child; and	"configurable to optionally support at least part of the [] thigh of the child":  [9-A1] [9-D3] [9-D2]  See Exhibit 5.11.1 (product images).  [9-D3] [9-D1] [9-D1]

Claim	Claim Text	Chicco Close to You Carrier
		See  www.xcite.com/wishlist/index/add/product/64462/form_key /2DGXSOcJQCTflo5j.
		"otherwise not support the [] thigh of the child":  [9-A1]  [9-D2]
		See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
		[9-A1] [9-D1] [9-D3]  See also Exhibit [YouTube].
9[e]	a hip belt [9-E1] coupled to the seat support part [9-D1] and configured for securing about the hips of the transporting individual,	[9-E1]  See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
9[f]	wherein if one of the upper-leg-support parts [9-D2 or 9-D3] is decoupled from the hip belt [9-E1], that upper-leg-support part is configured such that it is foldable against [9-F1] the seat support part [9-D1] and/or against the torso support part [9-A1].	[9-F1] [9-D3] [9-D2] [9-E1]
		See Exhibit 5.11.1 (product images).
		[9-A1] [9-F1]  [9-D1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
11	The carrier as recited in claim 9, further comprising:	See above analysis.
11[a]	a first fastener [11-A1] coupled to the left shoulder strap [9-B1] proximate the lower left-strap end [9-B3];	[9-B1] [9-B3] [11-A1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[9-B3] [9-B3]
		See Exhibit 5.11.1 (product images).

EX. 5.11 - Page 25 of 48

Claim	Claim Text	Chicco Close to You Carrier
11[b]	a second fastener [11-B1] coupled to the torso support part [9-A1] proximate the lower left coupling point [9-B5], wherein the first fastener [11-A1] is configured for coupling to the second fastener [11-B1];	[9-A1] [9-B5] [11-A1] [11-B1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[9-A1]  See Exhibit 5.11.1 (product images).

EX. 5.11 - Page 26 of 48

Claim	Claim Text	Chicco Close to You Carrier
11[c]	a third fastener [11-C1] coupled to the right shoulder strap [9-C1] proximate the lower right-strap end [9-C3]; and	[9-C1] [9-C3]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[9-C1] [11-C1]
		See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
11[d]	a fourth fastener [11-D1] coupled to the torso support part [9-A1] proximate the lower right coupling point [9-C5], wherein the third fastener [11-C1] is configured for coupling to the fourth fastener [11-D1].	[11-C1] [9-A1] [11-D1] [9-C5] See Exhibit 5.11.1 (product images).
14	The carrier as recited in claim 9,	See above analysis.
14[a]	wherein the carrier is configurable to enable carrying the child in one of at least two of the following positions: on the back [14-A1], on the hip, or on the front [14-A2] of the transporting individual.	"Front carry facing in from 7.5lbs with infant footrests to keep baby's legs drawn up"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.  "Back carry for babies who can sit upright unassisted"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[14-A1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[14-A2]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

EX. 5.11 - Page 29 of 48

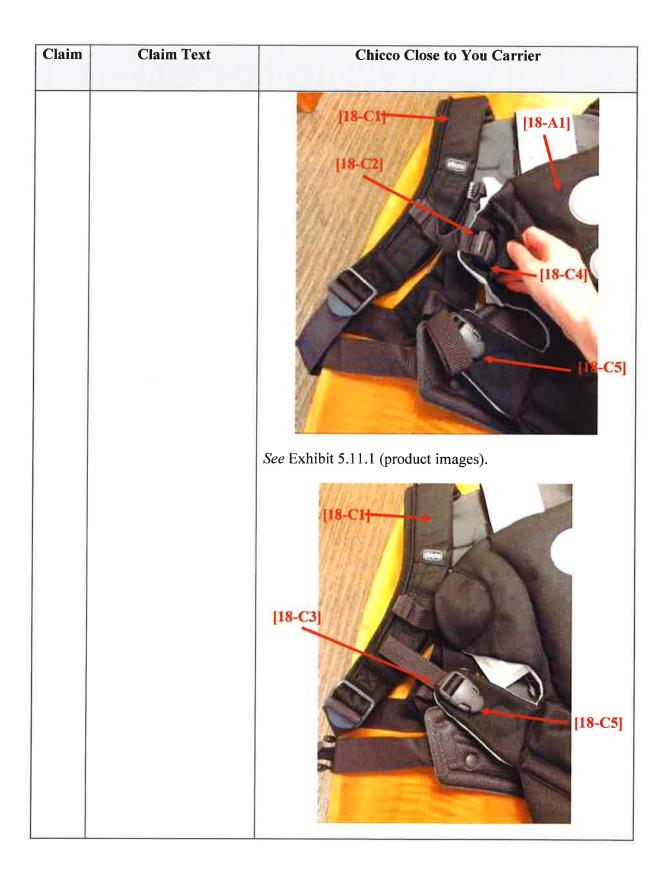
Claim	Claim Text	Chicco Close to You Carrier
15	The carrier as recited in claim 14,	See above analysis.
15[a]	wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual [15-A1],	[15-A1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
15[b]	wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual,	

Claim	Claim Text	Chicco Close to You Carrier
15[c]	and wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual [15C-1] or facing away from the transporting individual [15-C2].	[15-C1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[15-C2]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
18	A carrier for transporting a child by a transporting individual, comprising:	The Close to You is a carrier for transporting a child by a transporting individual.

Claim	Claim Text	Chicco Close to You Carrier
		Child Transporting individual  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
18[a]	a torso support part [18-A1] configured to support the torso of the child placed in the carrier;	[18-A1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
18[b]	a left shoulder strap [18-B1] having an upper [18-B2] and a lower [18-B3] left-strap ends configured for coupling to the torso support part [18-A1] at respectively an upper left coupling point [18-B4] and a lower left coupling point [18-B5] on the torso support part [18-A1];	[18-B4] [18-B1] [18-B2] [18-B3] See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[18-B2] [18-B1] [18-B4] [18-A1] See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
		[18-B3] [18-B5]
18[c]	a right shoulder strap	See Exhibit 5.11.1 (product images).
10[0]	[18-C1] having an upper [18-C2] and a lower [18-C3] right-strap ends configured for coupling to the torso support part [18-A1] at respectively an upper right coupling point [18-C4] and a lower right coupling point [18-C5] on the torso support part [18-A1];	[18-C1] [18-C2] [18-C4] [18-C5]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.



EX. 5.11 - Page 35 of 48

Claim	Claim Text	Chicco Close to You Carrier
		See Exhibit 5.11.1 (product images).
18[d]	a seat support part [18-D1] coupled to the torso support part [18-A1] and configured to support the posterior of the child, wherein the seat support part [18-D1] comprises a left upper-leg-support part [18-D2] disposed on the left side of the seat support part and configurable to optionally support at least part of the left thigh of the child and otherwise not support the left thigh of the child and a right upper-leg-support part [18-D3] disposed on the right side of the seat support part and configurable to optionally support at least part of the right thigh of the child and otherwise not support the right thigh of the child and otherwise not support the right thigh of the child; and	"configurable to optionally support at least part of the [] thigh of the child":  [18-A1]  [18-D2]  See Exhibit 5.11.1 (product images).  [18-D3]  [18-D1]  [18-D1]

Claim	Claim Text	Chicco Close to You Carrier
		See www.xcite.com/wishlist/index/add/product/64462/form_key /2DGXSOcJQCTflo5j.
		"otherwise not support the [] thigh of the child":
		[18-A]
		[18-D1] [18-D2]
		See Exhibit 5.11.1 (product images).

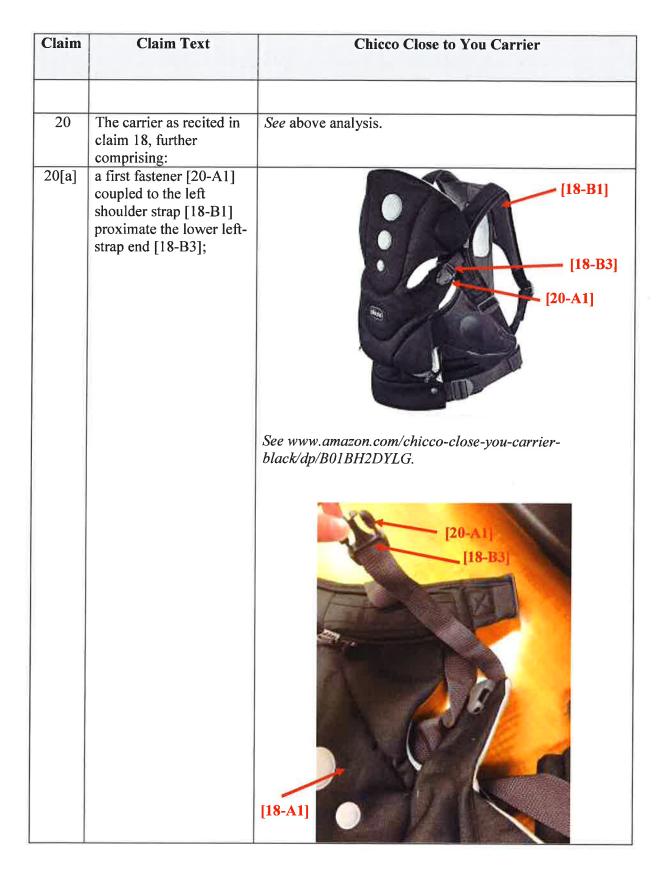
Claim	Claim Text	Chicco Close to You Carrier
		[18-A1] [18-D1] [18-D3]  See www.youtube.com/watch?v=f2AQzpEzA_E,
18[e]	a hip belt [18-E1] coupled to the seat support part [18-D1] and configured for securing about the hips of the transporting individual,	[18-E1]  See Exhibit 5.11.1 (product images).

Claim	Claim Text	Chicco Close to You Carrier
18[f]	wherein the left upper-leg-support part [18-D2] is further configured for coupling to the left side of the hip belt [18-F1],	[18-D2] [18-F1]  See Exhibit 5.11.1 (product images).
105.1		See Exhibit 3.11.1 (product images).
18[g]	wherein the right upper- leg-support part [18-D3] is further configured for coupling to the right side of the hip belt [18-G1].	[18-D3] [18-G1]  See Evhibit 5.11.1 (product images)
		See Exhibit 5.11.1 (product images).
19	The carrier as recited in claim 18,	See above analysis.

Claim	Claim Text	Chicco Close to You Carrier
19[a]	wherein if the left upper-leg-support part [18-D2] is coupled to the left side of the hip belt [18-F1] and the right upper-leg-support part [18-D3] is coupled to the right side of the hip belt [18-G1], the left upper-leg-support part [18-D2] and the right upper-leg-support part [18-D3] are configured for supporting the child's thighs proximately perpendicular [19-A1] to the child's body, and	[18-D2] [18-G1]  See Exhibit 5.11.1 (product images).  [19-A1]  [18-D3]  [18-G1]  [18-G1]  See  www.xcite.com/wishlist/index/add/product/64462/form_key /2DGXSOcJQCTflo5j.



EX. 5.11 - Page 41 of 48



EX. 5.11 - Page 42 of 48

Claim	Claim Text	Chicco Close to You Carrier
		See Exhibit 5.11.1 (product images).
20[b]	a second fastener [20-B1] coupled to the torso support part [18-A1] proximate the lower left coupling point [18-B5], wherein the first fastener [20-A1] is configured for coupling to the second fastener [20-B1];	[18-A1] [20-A1] [20-B1]
		See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[20-A1] [18-A1] [18-A1] See Exhibit 5.11.1 (product images).

EX. 5.11 - Page 43 of 48

Claim	Claim Text	Chicco Close to You Carrier
20[c]	a third fastener [20-C1] coupled to the right shoulder strap [18-C1] proximate the lower right-strap end [18-C3]; and	[18-C1] [18-C1] [20-C1]  See www.amazon.com/chicco-close-you-carrier-
		black/dp/B01BH2DYLG.
		See Exhibit 5.11.1 (product images).

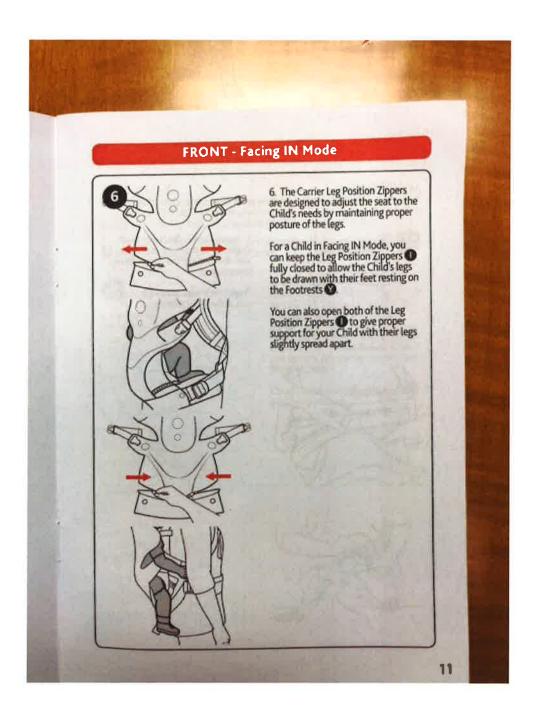
Claim	Claim Text	Chicco Close to You Carrier
20[d]	a fourth fastener [20-D1] coupled to the torso support part [18-A1] proximate the lower right coupling point [18-C5], wherein the third fastener [20-C1] is configured for coupling to the fourth fastener [20-D1].	[20-C1] [18-A1] [20-D1] [18-C5] See Exhibit 5.11.1 (product images).
23	The carrier as recited in claim 18,	See above analysis.
23[a]	wherein the carrier is configurable to enable carrying the child in one of at least two of the following positions: on the back [23-A1], on the hip, or on the front [23-A2] of the transporting individual.	"Front carry facing in from 7.5lbs with infant footrests to keep baby's legs drawn up"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.  "Back carry for babies who can sit upright unassisted"  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

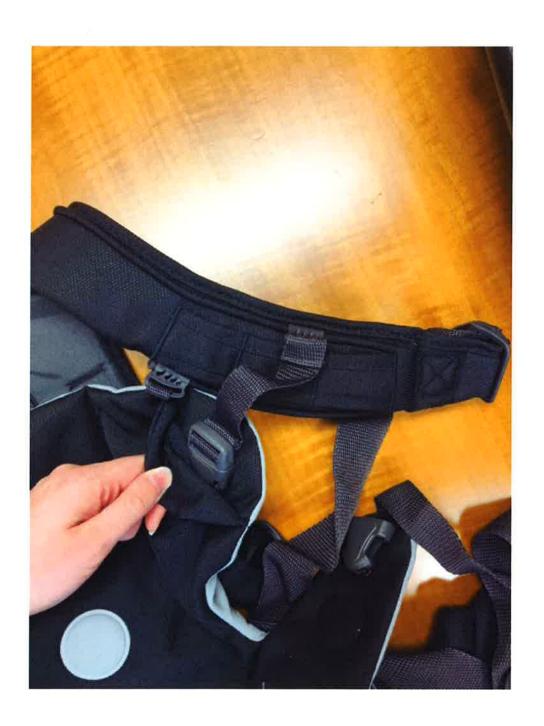
8	[23-A1]
	See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
	[23-A2]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

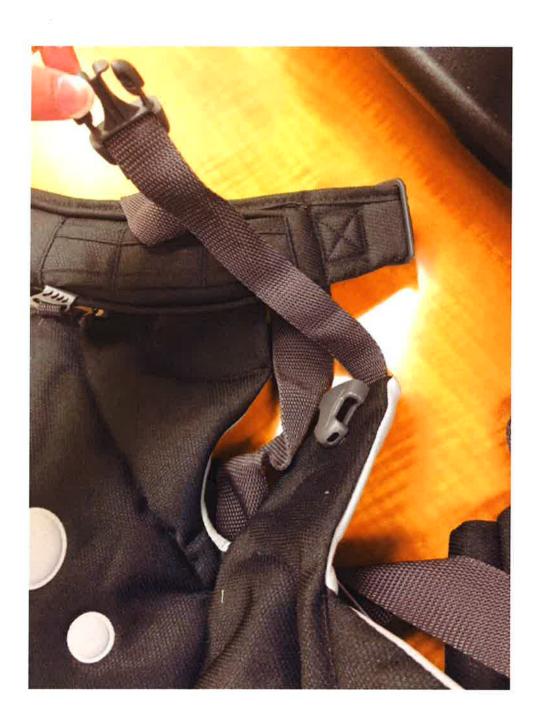
EX. 5.11 - Page 46 of 48

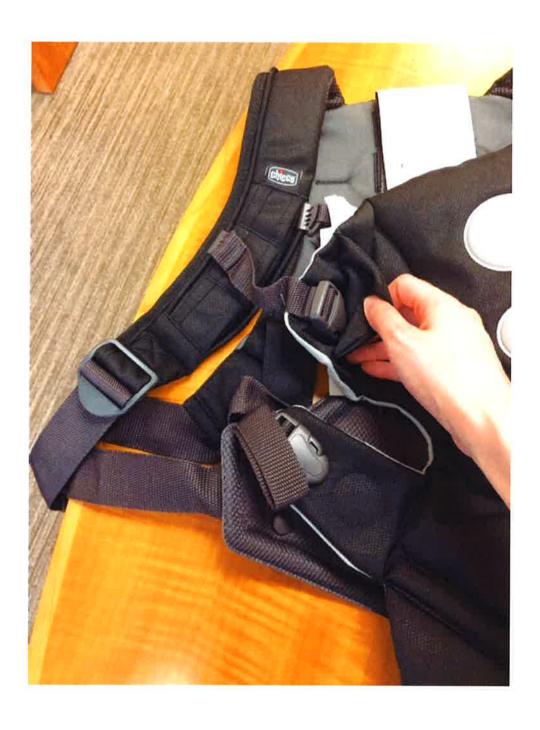
Claim	Claim Text	Chicco Close to You Carrier
24	The carrier as recited in claim 23,	See above analysis.
24[a]	wherein if the carrier is configured for carrying the child on the back of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual [24-A1],	[24-A1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
24[b]	wherein if the carrier is configured for carrying the child on the hip of the transporting individual, the carrier is further configurable for carrying the child facing toward the transporting individual,	

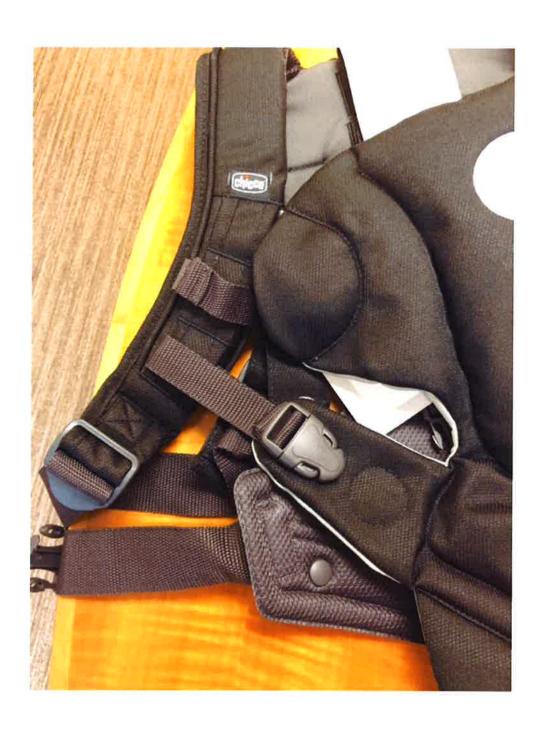
Claim	Claim Text	Chicco Close to You Carrier
24[c]	and wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is further configurable for carrying the child either facing toward the transporting individual [24-C1] or facing away from the transporting individual [24-C2].	[24-C1]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[24-C2]  See www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.



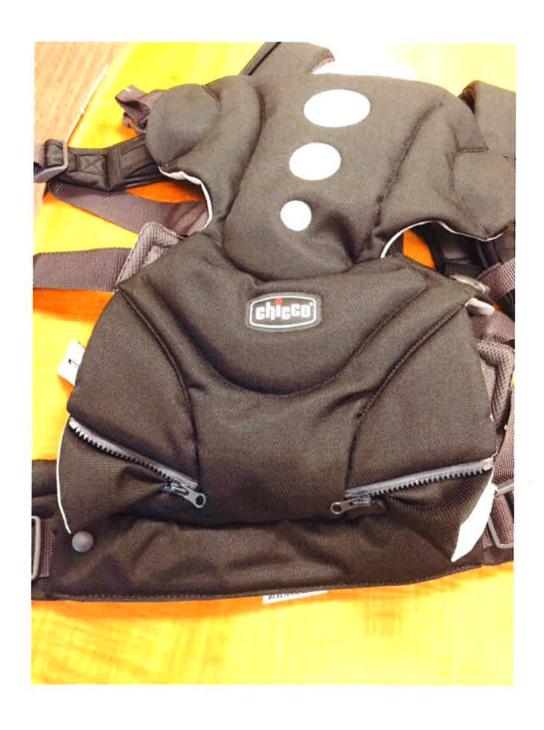












## EXHIBIT 4

## **EXHIBIT 6.11**

## Claim Chart for Infringement of U.S. Patent No. 8,424,732 by the Chicco Close to You Carrier

This chart describes infringement of U.S. Patent No. 8,424,732 patent ("the '732 patent") by the Chicco Close to You Carrier ("Chicco") as an exemplary product. The Chicco infringes the specified claims literally and under the doctrine of equivalents. The infringement analysis in this chart is preliminary and Complainant's investigation is ongoing. Complainant reserves the right to provide additional theories under which Respondent's products infringe the '732 patent, or evidence to support its current theories, upon obtaining discovery from Respondent.

Claim	Claim Text	Chicco Close to You Carrier
10	A carrier for transporting a child by a transporting individual, comprising:	The Close to You is a carrier for transporting a child by a transporting individual.  Child  Transporting individual  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
10[a]	a torso support part [10-A1] configured for supporting at least part of the torso of the child placed in the carrier;	[10-A1]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
10[b]	a seat support part [10-B1] coupled to the torso support part [10-A1] and configured to support the posterior of the child, wherein the seat support part [10-B1] comprises a left upper-leg-support part [10-B2] disposed on the left side of the seat support part and a right upper-leg-support part [10-B3] disposed on the	[10-B1] [10-B3] [10-B2]
	right side of the seat support part; and	See Exhibit 6.11.1 (product images).
		[10-A1]  [10-B3]  [10-B1]  See  www.xcite.com/wishlist/index/add/product/64462/form_key/2DGXSOcJQCTflo5j

Claim	Claim Text	Chicco Close to You Carrier
10[c]	a hip belt [10-C1] coupled to the seat support part [10-B1] and configured for securing about the hips of the transporting individual,	[10-B1]
		See Exhibit 6.11.1 (product images).
		See www.xcite.com/wishlist/index/add/product/64462/form_key/2DGXSOcJQCTflo5j.

Claim	Claim Text	Chicco Close to You Carrier
10[d]	wherein the left upper-leg-support part [10-B2] is configured for optionally coupling to the left side of the hip belt [10-D1], wherein the right upper-leg-support part [10-B3] is configured for optionally coupling to the right side of the hip belt [10-D2],	[10-B2] [10-D2] [10-D1]
		See Exhibit 6.11.1 (product images).
		[10-B3] 10-B2] See Exhibit 6.11.1 (product images).
10[e]	wherein if the left upper-	"configured to support ":
	leg-support part [10-B2] is coupled to the left side of the hip belt [10-D1], the left upper-leg-support part [10-B2] is	C Transpose of

Claim	Claim Text	Chicco Close to You Carrier
	configured to support at least part of the left upper leg of the child [10-E1], otherwise the left upper-leg-support part [10-B2] does not substantially support the left upper leg of the child [10-E1], and	[10-B2]
		See Exhibit 6.11.1 (product images).
		[10-F1; mirror of 10-E1]  [10-B3; mirror of 10-B2]
		[10-D2; mirror of 10-D1]
		See www.xcite.com/wishlist/index/add/product/64462/form_key /2DGXSOcJQCTflo5j.
		"otherwise does not substantially support ":

EX. 6.11 - Page 6 of 13



EX. 6.11 - Page 7 of 13

Claim	Claim Text	Chicco Close to You Carrier
10[f]	wherein if the right upper-leg-support part [10-B3] is coupled to the right side of the hip belt [10-D2], the right upper-leg-support part [10-B3] is configured to support at least part of the right upper leg of the child [10-F1], otherwise the right upper-leg-support part [10-B3] does not support the right upper leg of the child [10-F1].	"configured to support ":  [10-B3]  See Exhibit 6.11.1 (product images).  [10-F1]  [10-B3]  [10-B2]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.



EX. 6.11 - Page 9 of 13

Claim	Claim Text	Chicco Close to You Carrier
11	The carrier as recited in claim 10,	See above analysis.
11[a]	wherein the carrier is configurable to enable carrying the child in at least one of the following positions: on the back [11-A1], on the hip, or on the front [11-A2] of the transporting individual.	"Front carry facing in from 7.5lbs with infant footrests to keep baby's legs drawn up"  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.  "Back carry for babies who can sit upright unassisted"  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
		[11-A1]
		See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[11-A2]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
12	The carrier as recited in claim 11,	See above analysis.
12[a]	wherein if the carrier is configured for carrying the child on the front of the transporting individual, the carrier is configurable for carrying the child in at least one of the following orientations: facing toward the transporting individual [12-A1], facing sideways to the transporting individual, or facing away from the transporting individual [12-A2].	[12-A1]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[12-A2]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.
14	The carrier as recited in claim 10,	See above analysis.
14[a]	wherein at least one of the upper-leg-support parts [10-B2 or 10-B3] is coupled to the hip belt [10-C1] by one or more fastening devices [14-A1] selected from the group consisting of mating areas of a hook and loop type fastener on that upper-leg-support part and the hip belt and mating snaps [14-A2] on that upper-leg-support part and the hip belt.	[14-A1] [14-A2] [10-C1]  See https://www.amazon.com/chicco-close-you-carrier-black/dp/B01BH2DYLG.

Claim	Claim Text	Chicco Close to You Carrier
		[10-B3] [14-A1] [10-B2] [10-C1] [14-A2] See Exhibit 6.11.1 (product images).



